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QUESTIONS
IN
SURGERY.

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ANNEX

Annex

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PREFATORY NOTE.

My object in preparing these questions for the use of my classes has been to furnish them with a guide that shall enable them to use any of the standard text-books in Surgery to advantage.

Those works which are most valuable to the practitioner for reference are too voluminous for the student, especially the beginner, unless he has some such aid by which he may reach the simple statement of fundamental principles without unnecessary delay or confusion. With such help, the choice among a large number of excellent works is comparatively unimportant.

I have naturally followed quite closely the outline of my Annual Lecture Course, and have endeavored to present the questions in such a manner as to stimulate scientific methods of inquiry; aiming, at the same time, to make them suggestive rather than exhaustive.

If this little work shall prove serviceable to other teachers in the recitation-room, and to other pupils than my own, by promoting directness of effort and clearness of thought, I shall be all the more glad to have prepared it.

WM. WARREN GREENE.

Portland, January 1, 1872.

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DEFINITIONS.

What is Surgery ?

What is Disease ?

When is a disease said to be acute ?

When is it said to be chronic ?

Define the term sthenic.

Define the term asthenic.

What is meant by a tonic condition of the system ?

What by atonic ?

What is the difference between a predisposing and
an exciting cause of disease ?

What other terms are used synonymously ?

When is disease said to be idiopathic ?

When symptomatic ?

When traumatic ?

How are the terms primary and secondary applied
to disease ?

What is meant by diathesis ?

What by cachexia ?

What by idiosyncrasy ?

What is irritability ?

What is meant by sympathy ?

What by reflex action ?

What by metastasis ?

What is meant by symptoms of disease ?

How do symptoms differ from signs ?

What is meant by diagnosis ?

What by prognosis ?

What is the meaning of pathognomonic ?

What by diagnostic ?

Define etiology.

Define pathology.



PART FIRST.

GENERAL SURGERY.

COLLAPSE, OR SHOCK OF INJURY.

Define collapse, or shock of injury.

How does it differ from syncope?

What causes produce it?

Which are the most frequent causes?

What of idiosyncrasy as modifying its character?

Who are bad subjects for this affection?

What is the effect of hemorrhage as a complication?

Give examples of collapse produced by different causes.

How does a combination of physical and mental causes affect the severity of the shock?

Is there any lesion in pure uncomplicated collapse?

Give the symptoms of shock referable to the skin; pulse; respiration; pupils; mind; special sensation; voluntary motion; sphincters; stomach and bowels.

What is the significance of vomiting?

Give the history of fatal termination.

Give the history of perfect reaction.

What are the symptoms of excessive reaction?

What other terms are applied to this condition?

- What are the signs of imperfect reaction ?
- What is the usual name for it ?
- What is meant by *masked shock* ?
- Describe such peculiarities as pertain to its causes, diagnosis, and prognosis.
- Give the general treatment for collapse.
- What need of care about over-stimulation ?
- Is there any choice between ammoniacal and alcoholic stimulants in different cases ? and, if so, what ?
- Is opium ever useful in the treatment of shock ?
- If so, when and why ?
- Is it ever proper to perform a severe operation, like amputation for example, while the patient is in a state of collapse ?
- If so, upon what principle ?
- Does "masked shock" require any modification of the treatment suitable for the ordinary form ; and, if so, what ?

TRAUMATIC DELIRIUM.

- Define the term Traumatic Delirium.
- What relation, if any, between the size or character of the wound and its occurrence ?
- What class of subjects are most obnoxious to it ?
- What are the signs of its approach ?
- How soon do they usually appear after the receipt of the wound ?
- When developed, what are the characteristic symptoms ?

How can it be diagnosticated from delirium tremens?

What is the pathognomonic symptom of delirium tremens?

How does delirium tremens differ from alcoholic mania?

How from chronic alcoholism?

What is the proper treatment for traumatic delirium?

Give reasons for the course recommended.

IRRITATION, CONGESTION, AND INFLAMMATION.

Define irritation.

Define congestion.

Define hyperæmia.

What is active congestion?

What is meant by determination of blood?

What is passive congestion?

What causes produce congestion?

What are its signs?

What group of symptoms characterize the morbid state of nutrition usually called inflammation?

What is the literal significance, and what the pathological value of the term "Inflammation"?

Name some of the causes of inflammation.

What is meant by resolution of inflammation?

Name the most important local consequences of inflammation.

Upon what will the results depend in an individual case?

How do the products or results of inflammation, the same in degree, vary in different tissues and organs?

Compare mucous and serous membranes in this respect.

State, in general terms, the treatment proper for acute inflammation.

What general name is given to the accompanying fever?

Is venesection ever proper?

If so, under what circumstances?

What is the proper mode of bleeding for its sedative effect? Why?

Is local depletion proper?

If so, when?

What is the *modus operandi*?

What are the different methods of effecting it?

What are the conditions appropriate for the use of cups, leeches, and scarification respectively?

State in general terms the value and action of cathartics, diuretics, and diaphoretics, in the treatment of inflammation.

Give the indications for the exhibition of the following remedies: veratrum viride; aconite; opium; mercury.

Explain the action of each.

How should the treatment vary in the sthenic and asthenic forms?

What shall determine the choice between cold and hot applications?

How do cold and heat act as remedial agents in inflammation?

What is the general plan of treatment in chronic inflammation?

Which form requires most constitutional treatment as a rule?

Which class of defibrinating agents are most appropriate in cases of chronic inflammation requiring such remedies, the preparations of mercury or iodine? Why?

What is the appearance and behavior of blood drawn from a system laboring under acute inflammation?

How does this differ from that drawn from a healthy system?

What is meant by the "buffy coat"?

What by the "cupped" appearance?

Explain these appearances.

What becomes of extravasated blood?

What is the meaning of extravasated?

What is the appearance and structure of inflammatory lymph?

What changes may it undergo in the tissues?

How is its character modified by conditions of the blood?

How by degrees of inflammation?

What is meant by plastic lymph?

What by aplastic?

What by caco-plastic?

REPAIR OF WOUNDS IN GENERAL.

What is the most perfect mode of healing?

What is meant by immediate union?

Give examples.

Is it of frequent occurrence ?

In what tissues most frequent ?

Is it possible in all tissues ?

State the conditions essential to this form of repair
as related to the kind of wound ; time of dressing ;
manner of dressing ; after treatment ; state
of nutrition, both local and general.

What is the most frequent mode of union of apposed cut surfaces ?

Why is the union oftener mediate than immediate ?

Describe the process of union by "First Intention."

What is the structure of the lymph ?

How does it organize ?

How does the lymph which repairs an open wound differ from that which closes a subcutaneous one ?

Which forms the most perfect scar ?

What conditions are essential to the formation of good organizable lymph ?

How does inflammation affect it ?

How are blood vessels formed in the scar ?

Under favorable circumstances, how soon does the process begin ?

How long time does it occupy ?

Describe the conditions essential for healing by First Intention, following the same order as in those for Immediate Union.

How do open wounds heal ?

What are granulations ?

Describe their formation and development.

Does the development of tissue through the process of granulation differ from that in union by First Intention?

If so, how?

What are the conditions for healthy granulation?

Describe the appearance of a healthy granulating sore.

Whence the pus which accompanies it?

Beneficial or not?

What thickness of tissue is ordinarily formed in this way?

What is meant by union by "Second Intention"?

Under what circumstances may it occur?

Describe the process of healing by "Scabbing."

What is its value as compared with the other modes?

Why?

Is it practicable as a rule? Why so?

When may it be employed?

What is the vascularity of scars as compared with the adjacent tissues?

Do they contain nerves?

Are they sensitive?

What is the appearance of a healthy scar?

What are the appearances of imperfectly organized scar tissue?

What relation between quality and quantity?

What is meant by the "Perfection of the Scar"?

Why do scars contract?

What scars contract most?

What ones least?

By what process does the scar loosen and become pliable?

How long time does the "perfecting" process occupy?
Are scars more or less liable to disease than other tissues? Why?

SUPPURATION.

Define suppuration.

When is pus said to be laudable?

What is its physical structure?

What its chemical composition?

Describe the pus cell.

How does it differ from the lymph cell?

How from the white blood corpuscle?

Describe the different kinds of pus and the conditions under which they occur.

Is pus ever formed except by inflammation?

Is pus ever dead blastema; and, if so, when?

What is meant by blastema?

What by protoplasm?

What by bioplasm?

ABSCESS.

What is an abscess?

How does it differ from purulent effusion?

What are the different kinds of abscess?

What causes in general produce them?

Describe the common phlegmonous abscess, giving its causes, symptoms, progress and termination.

What kind of pus has it?

What sort of cyst, and what becomes of it?

Describe the diffuse abscess, following the same line of thought as in studying the phlegmonous form.

Compare carefully the differences in cause, condition of pus and constitutional affection, in the two forms.

What is a chronic abscess?

What other terms are applied to it?

In what diatheses does it occur?

Describe its peculiarities as compared with the other forms.

Give the treatment for the several forms of abscess, with reasons therefor.

What is pyæmia?

What are its causes?

How does it differ from septicæmia?

How from ichoræmia?

What is the effect of laudable pus in the blood?

What of septic material?

Give the pathology of secondary or multiple abscess.

What are the symptoms?

What is the appropriate treatment?

What are the principal antiseptic remedies?

MORTIFICATION.

Define mortification; gangrene; sphacelus.

What is a slough?

What is meant by "sloughing"?

Define the term ulceration.

What is the significance of the terms acute, chronic, dry, moist, common, and specific, as applied to mortification?

ACUTE MORTIFICATION.

What organs are most liable to acute mortification?

What relation between liability to mortification and the differentiation of structure and function in an organ?

Is the popular notion that mortification of internal organs is of frequent occurrence correct?

Name the principal causes of acute mortification and the *modus operandi* of each.

What modification of local symptoms generally denotes its approach?

What are the corresponding changes in the constitutional symptoms?

What are the local signs of acute mortification?

What change in the general symptoms immediately after its occurrence?

By what natural process is the slough removed?

What is meant by "the line of demarcation"?

How is it produced?

What does it indicate?

How soon does it usually appear after the slough is formed?

What circumstances prevent its formation?

During the separation of the slough, what is the character of the discharge?

Describe carefully the process of separation and the subsequent healing of the parts.

Is the process attended with much or little pain?

What is the constitutional condition of the patient during this process? Why?

State the general indications to be fulfilled in local treatment.

State the general indications for constitutional treatment.

What, as a rule, should be the temperature of the local applications?

Are there exceptions to this rule; and, if so, what is the guide to them?

What is the value of poultices in this condition?

What caution about their use?

What purpose do disinfectants subserve?

Name the most important ones.

Are stimulating applications applicable?

Name some of the best.

Under what circumstances do stimulant applications prove sedative and anodyne?

What is the value and *modus operandi* of irrigation?

By what simple methods may it be employed?

What are the most reliable remedies for fulfilling the indications for constitutional treatment?

Is it desirable or not to remove partially detached sloughs? Why?

What caution in the use of cutting instruments, and why?

In cases requiring amputation, why is it the rule to wait until the line of demarcation appears?

Are there exceptions to this rule, and if so, under what circumstances?

HOSPITAL GANGRENE.

Whence the term "Hospital" gangrene?

Does it ever occur sporadically?

What conditions are most favorable to its development?

How does this form of acute mortification differ from that previously described as regards:

1. Suddenness of attack?
2. Rapidity of progress?
3. Character of sloughs?
4. Character of ulceration?

Why this difference?

5. Amount and quality of discharge?
6. Amount and persistence of pain?
7. Liability to hemorrhage? Why?
8. In type and gravity of constitutional symptoms?

Is it primarily a local or constitutional disease?

What are the proofs?

Are there exceptions to this rule?

Is it contagious or infectious, or both?

Define these terms.

Does it ever attack a sound surface?

In a wound healing kindly by granulation and discharging laudable pus, describe carefully the successive changes which mark the invasion and full development of "Hospital" gangrene.

Which is of greatest importance, local or general treatment? Why?

What are the indications to be fulfilled locally?

How do they differ from those in the simple forms of mortification ?

Compare in value, and give directions for the use of the following agents as local remedies, and explain the action of each : bromine ; nitric acid ; acid nitrate of mercury ; iodine ; nitrate of silver ; permanganate of potash ; Labbarraque's solution ; carbolic acid ; irrigation.

What is the constitutional treatment ?

What are some of the internal remedies which most certainly and rapidly increase the plasticity of the blood ?

What are the best anti-septic remedies for internal use ?

What is the value of opium in this affection ?

Is amputation ever proper in this affection, and, if so, under what circumstances ?

What disposal should be made of hospital patients attacked with this disease ?

What treatment should the wounds receive ?

What precautions are necessary to avoid contagion ?

State particularly about instruments, sponges, and dressings.

Is it ever safe to apply sponges to a raw surface that have been previously soiled by purulent or ichorous material ?

CHRONIC MORTIFICATION.

Define it.

What other term is often applied and usually appropriate ?

What are the usual causes ?

What are the conditions besides general debility, incident to old age, which induce it ?

What circumstances determine the dryness or moisture of the slough ?

Which condition usually obtains ?

Is arterial degeneration a predisposing or exciting cause ?

Is embolism a frequent cause or not ?

What is embolism ?

What is its origin ?

Compare step by step its symptoms and progress with those of acute mortification.

What is the appropriate treatment for chronic mortification ? locally ? constitutionally ?

How does it differ from the treatment in acute forms ?

Describe the process of spontaneous amputation.

Is it desirable or not ? Why ?

As a rule, is amputation advisable ?

Under what circumstances ?

Is it ever justifiable to amputate before the line of demarcation has formed ?

If so, why ?

What are the modes of death in the several forms of mortification ?

ULCERS.

What is an ulcer ?

Repeat the definition for ulceration.

What is an abrasion ?

What is an excoriation ?

Describe, in general terms, the methods of healing for each.

Excluding traumatic cases, name the two local pathological conditions, one or both of which always precede and produce ulcers.

What is the basis of classification for ulcers?

Name the more frequent causes of ulcers.

What is meant by a "healthy" ulcer?

Describe the character and progress of a simple ulcer until healed.

Define the following terms as applied to ulcers, defining the character of the sore in each instance: acute; chronic; common; specific; inflamed; indolent; irritable; indurated; callous; dropsical; serpiginous; phagadenic; sloughing; varicose; menstrual.

Name any other terms that are applied to these sores.

Does the ulcer heal from centre or periphery?

What depth of new tissue is ordinarily formed in the process?

To what is due the deceptive appearance of the "filling up" of a deep cavity by granulation?

What is the source of the discharge in an ulcer?

How does it differ in quality and amount in the different varieties of sore?

Is laudable pus an appropriate dressing for an ulcer or not?

Explain why.

What are the general indications to be fulfilled in the constitutional treatment?

What in the local treatment?

How, in general terms, do these indications differ for the acute and chronic forms?

For the simple and specific?

How does the treatment, both local and general, vary for the several varieties enumerated above? In answering this question differentiate carefully the several methods of treatment with the *reasons therefor*.

Compare also the action, both in kind and degree, and the differential value of the following agents, as local measures: rest; simple cerate and its congeners; local depletion—scarification, leeches; cold; heat (state the different methods of application of the two last under different circumstances and the value of the alternate application of each); nitrate of silver; tinct. iodine; sulphurous acid; acetic acid; glycero-tannin; sulphate of copper; chromic acid; bromine; acid nitrate of mercury; permanganate of Potash; carbolic acid; calomel; pressure; excision.*

How does extent of surface affect the tendency to heal?

In what parts of the body are ulcers most tardy in healing? Why?

Name any additional causes which render ulcers indolent.

* The author deems it of great importance that the line of thought suggested by these questions should be encouraged on the part of the teacher, and cultivated by the student to the fullest extent, thus testing thoroughly the pupil's knowledge of different, yet closely allied, pathological conditions and processes, and of the *modus operandi* of remedies and their applicability to these conditions.

What is the value of rhinoplasty in the treatment of ulcers ?

Under what circumstances is it warrantable ?

What are the different methods of performing it ?

When is one to be employed in preference to the other ?

MORBID GROWTHS.

What is a morbid growth ?

What other terms are used synonymously ?

Into what two main classes are morbid growths divided ?

Compare benign and malignant growths with regard to :

1. Structure. Define in this connection the terms analogous ; heterologous ; heteroclitic ; homologous.
2. Rapidity of growth.
3. Pain.
4. Origin, whether local or constitutional.
5. Permanency.
6. Invasion of adjacent parts.
7. Infection of system.
8. Hereditary transmission.
9. Tendency to recur.

Are there exceptions to the general rule with reference to either of these points ?

If so, state them.

Is there a distinct line of demarcation between benign and malignant growths in all cases ?

Does a growth primarily benign, ever become malignant?

If so, under what circumstances?

BENIGN TUMORS.

What is a Hypertrophic tumor?

Give examples.

How are they produced?

What is the appropriate medicinal treatment?

Is this sufficient in the majority of cases?

What is the proper surgical procedure when practicable?

What is a Vascular tumor? *

What is an Adipose tumor?

Define Lipoma.

Define Steatoma.

What is the structure of a Fatty tumor?

In what parts of the body most frequent?

At what age?

In what tissue?

What variation in density? Why?

Are they vascular or not?

What size do they attain?

Do they grow rapidly, or not?

Steadily, or not?

Are they painful, or not?

* See Surgery of Blood-vessels.

Are they single or multiple ?

Have they a cyst ?

If so, what is its structure ?

How are they harmful ?

Are they likely to recur ?

Do they ever acquire a malignant character ?

Does any form of medication influence them ?

If so, what ?

Under what circumstances should excision be performed, and how ?

What is a Fibroma ?

Compare in definition the terms fibrous, fibroid, and fibro-plastic ; fibro-cellular and fibro-cystic.

Is the structure of the fibrous tumor analogous to the white or yellow fibrous tissues of the body ?

Compare carefully the fibrous with the fatty tumor as to its causes, favorite localities, age, size, feel, mobility, vascularity, rapidity, and regularity of growth, enveloping cyst, liability to inflammation, to degeneration, and to recurrence.

Is there any apparent explanation of the frequent occurrence of these growths in the uterus ?

What are "Uterine Polypi" ?

At what age are they most apt to occur in this locality ?

What is meant by a sub-mucous fibroid ? intra-mutal ? peri-uterine ? sub-peritoneal ?

In what ways do these uterine fibroids interfere with the patient's comfort or safety ?

Which form is most likely to produce hemorrhage ?

Whence the hemorrhage?

If the hemorrhage can be controlled, what is the prognosis in a majority of these cases?

What is the appropriate medicinal treatment for fibrous tumors?

What its value?

What circumstances are liable to inspire an undue confidence in medication of these growths?

How much can be accomplished by pressure?

Must it be continuous or intermittent?

Under what circumstances is extirpation to be practiced?

When removal of the entire growth is impracticable either by excision or ligature, is it ever advisable to remove a part of the tumor?

What usually follows such a procedure?

What dangers from it?

What is the effect of injecting these growths with acetic acid?

Is it ever advisable to destroy these tumors, in whole or part, by actual or potential cauterization?

If so, when?

By what methods may the bleeding from a uterine fibroma be temporarily staid?

What is a Horny tumor?

What its composition?

Where does it occur?

What effect does race, sex, or climate appear to exercise upon its development?

What size do they attain?

Of what shape are they ?

Are they ever dangerous ? How ?

What is the cure ?

Describe the method.

Do they recur ?

What is an Enchondroma ?

What the chemical composition ?

The microscopic appearance ?

How do they vary in structure ?

In what parts of the body and in connection with
what tissues do these growths occur ?

At what age most frequently ?

What size do they attain ?

What is the usual shape ?

Has a cartilaginous tumor any cystic envelope ?

If so, what is its structure ?

Is it slow or rapid in growth ?

Painful or not ?

How are adjacent parts affected by its growth ?

Compare in this respect with fibroma.

Make the same comparison with reference to liability
to malignant degeneration.

What is the proper treatment ?

Under what circumstances is excision to be practiced ?

When is amputation preferable ?

How much liability is there to recurrence ?

What is the technical name for an Osseous tumor ?

How does an ostoma differ from an exostosis ?

What is the structure of these growths ?

What their seat of origin ?

What their causes ?

Is their growth slow or rapid ?

Painful or not ?

What is their comparative size ?

How are they harmful ?

How removed ?

Do they recur ?

What is the composition of a calcareous tumor ?

Is it an organized body ?

Where are these masses found ?

What causes them ?

How large are they ?

What harm comes from them ?

How are they to be treated ?

What are Neuromata ?

Describe their structure.

What is their size ?

What class of nerves do they affect ?

How connected with them ?

In what parts of the body especially ?

Single or multiple ?

What is their etiology ?

Most frequent in males or females ?

What symptoms do they produce ?

How to be diagnosed from ordinary neuralgia ?

What is the treatment ?

What is the structure of the Painful Subcutaneous
tubercle ?

What causes produce it ?

At what age does it occur ?

How large ?

What are the peculiar symptoms ?

How explained ?

Is it more frequent in men or women ?

Is its growth slow or rapid ?

Does it or not involve the skin ?

In what manner should it be excised ?

How else may it be destroyed ?

Which mode is preferable ?

What is an Encysted tumor ?

Common or not ?

Produced by what causes ?

What two principal divisions are made with reference
to mode of origin ?

Give examples of the hypertrophic class.

How do cysts vary in size ?

In contents ?

In thickness ?

Are they vascular ?

What is meant by the term unilocular ? multilocular ?
proliferous ? polycystic ? exogenous ? endoge-
nous ?

What formidable class of tumors best illustrate the
varieties of compound cysts ? *

Compare the clinical history of a cyst with that of a
fibroma.

* See Ovarian Tumors in Special Surgery.

Of a steatoma.

Of an enchondroma.

How is a differential diagnosis made ?

What is meant by fluctuation ?

What circumstances render it obscure ?

When is it entirely absent ?

What is an exploring needle ?

When and how to be used ?

Is its use attended with danger ?

Which is best, an exploring needle or trocar ?

In what several ways may cysts impair the health or destroy life ?

Are they ever cured spontaneously ?

If so, how ?

By what methods may they be destroyed ?

State carefully the *modus operandi* of such destructive agents as potassa-fusa, the seton and galvano-cauterization.

Are these methods preferable or not to excision when the latter is practicable ?

What particular caution is to be exercised in the use of the knife ?

What is the effect of leaving a portion of the sac behind ?

Any exceptions to the rule ?

What is a Hydatid ?

Is it analogous or heterologous ?

Where is it found ?

What is its size ?

Describe the sac and its contents, the latter chemically as well as physically.

What is the essential element in a hydatid?

Define entozoon.

Define acephalocyst.

Describe the echinæus.

How are these growths diagnosed from ordinary cysts?

Are they single or multiple?

How do they differ from other cysts in their clinical history?

What is the proper treatment?

What class of morbid growths are named Polypi?

Why so called?

Where are they found?

What is their structure?

Do similar growths occur on cutaneous surfaces?

If so, do they receive the same name?

Name the principal varieties of polypoid tumors.

What is the structure of the gelatinous variety?

What other names are applied to it? Why?

Where does it occur?

What causes produce it?

Vascular or not?

What size does it attain?

Vascular or not?

How and from what causes does it vary in size?

Is it pediculated or sessile?

Define these terms.

Multiple or single?

At what age most frequent?

In what way does it prove injurious?

Is its growth slow or rapid?

What are its symptoms?

What is the appropriate medical treatment?

How much may be accomplished by medication?

Describe the several methods of extirpation.

Which is preferable, and why?

How much liability is there to return?

What, if any, prophylactic treatment is proper?

Describe the fibrous polypus, and carefully compare it with the gelatinoid with reference to the following points: structure; vascularity; frequency; associated diathesis; location; rapidity of growth; size; symptoms when occupying similar sites; pediculated or sessile character; treatment required; liability to return.

In the same order, compare the granular and vascular polypi with those already described, and with one another.

Are any of the polypoid growths liable to become the seat of malignant action?

If so, which variety?

MALIGNANT TUMORS. GENERAL CHARACTERISTICS.

What is a heterologous growth?

Are all malignant growths heterologous?

Are all heterologous growths clinically malignant?

Are analogous growths ever malignant?

Can a distinct line of division, as regards structure, be drawn between benign and malignant tumors, or do they imperceptibly shade into one another?

- What, as a rule, is the primary structure of cancer?
What is the stroma?
What is the "cancer cell"?
Of what value is the microscope as a means of diagnosis?
Is the deposit diffused or circumscribed?
Are these growths of local or constitutional origin?
What is the proof?
Are there exceptions to this rule?
If so, under what circumstances?
Is cancer hereditary?
Name the most frequent sites of cancer?
Is any tissue or organ exempt from this disease?
What is the rapidity of growth?
What size do malignant tumors attain?
Are they painful or not?
Are external or internal cancers most painful?
What are the essential tests of malignancy?
How soon, upon the average, do these tissues ulcerate?
How is this peculiar tendency to early self-destruction to be explained?
What is the effect upon the adjacent parts?
At what period are the lymphatics usually involved?
How is this complication explained?
What is its significance?
How does cancer destroy life?
If removed, how great is the liability to return?
What is meant by the "cancerous cachexia"?
Describe it.
Are secondary cancerous deposits common?
Most frequent internally or externally?

Give now the several important points in a differential diagnosis between benign and malignant growths in general.*

What are the two principal forms of malignant disease?

Why so called?

State the special characteristics of scirrhus and encephaloid as compared with one another, as to:

1. Hardness. Any peculiarity of.
2. Elasticity. Any peculiarity of.
3. Size.
4. Rapidity of growth. Average time occupied by each.
5. Pain. Character and time of.
6. Vascularity. And of adjacent parts.
7. Involvement of lymphatics. Extent and time when.
8. Time of life obnoxious to it.
9. Organs and tissues invaded.
10. Character of ulcer,—base, edges, surface, rapidity of progress, discharge (quality and quantity), hemorrhage (frequency and amount of).

Are these distinctive lines sharply defined in all cases?

Are both forms of disease ever blended in a single case?

Describe the structure of calloid cancer.

* It is advised that the drill upon these important points be especially thorough and exhaustive.

Whence the name ?

What other terms are applied, and why ?

Is there much or little variety in the size of the alveolæ ?

Where is it found ?

How does it compare with the forms of heteroclitic growths previously described in regard to : rapidity of development ; disturbance of local or general health ; locality ; liability to recur after removal ?

What are the names of differential diagnosis ?

What is melanotic cancer (literally) ?

Define melanosis.

Whence the color ?

What is fungus hematodes (literally) ?

Are these two last distinct forms of disease or names occasionally applied to a form of malignant disease already described ?

If the latter, what form and when are these terms appropriate ?

What is a myceloid tumor ?

Describe the appearance of its cut surface ?

Compare the myceloid tumor with the encephaloid on the one hand, and the fibro-plastic or recurrent fibroid on the other, as regards its structure and history.

What is its probable relationship to either ?

What is epitheloma ?

What is canceroid disease ?

What does the *oid* termination signify always ?

What other terms are used, and why ?

Is it of local or constitutional origin?

What is the evidence?

At what age does it appear?

Where most frequently situated?

Why called "smoker's cancer"?

Is there any foundation in fact for this term?

Describe its rise and progress.

What signs indicate constitutional infection?

To what extent does it differ from the more malignant forms of disease in its liability to return after removal?

Does this difference obtain after the adjacent lymphatics are involved?

Is there any difference in this respect in different localities?

If so, state it.

Is malignant disease ever cured spontaneously?

If so, by what process?

To what extent are this class of growths affected by internal medication?

How much by sorbefacient remedies locally applied?

What is the value of radical treatment in malignant disease?

Which method of extirpation is preferable, that by caustics or by the knife?

Compare the two methods carefully as regards completeness of removal, injury done to adjacent tissues, pain produced, and the character of resultant wound.

What is the composition of the so-called "cancer plasters" of "cancer doctors"?

What is their action?

What are the so-called "roots" of the cancer?

What chance of permanent cure does excision offer?

What chance of prolonging life?

What chance, of mitigating suffering?

Is excision ever proper as a palliative measure merely?

If so, under what circumstances?

State the general rules for its performance, with relation to: time when, extent and character of incisions, and subsequent treatment of the wound.

What should be the after treatment?

Is it proper or not to interfere with "latent cancer"?

If cancer recurs, is it more or less likely to develop internally or externally?

Is there, in this connection, any argument for operative interference?

If so, what?

Aside from operative procedure, what are the principal indications in the palliative treatment of cancer?

State, in this connection, the particular class of tonics to be used, and why.

To what extent, and in what manner are anodynes to be employed?

What are the principal local remedies to relieve pain; check discharge; control hemorrhage; and to neutralize the peculiar fetor?

What are the several modes of death from cancer?

SYPHILIS.

What is meant by Venereal disease?

What are its principal forms?

Define syphilis.

What do we know of its origin?

What is understood by primary syphilis?

How soon does it appear after exposure?

What terms are applied to the primary sore?

Where is it usually situated?

Describe the two varieties known as chancre and chancroid, comparing them with reference to the following points:

1. Date of appearance after exposure.
2. Rapidity of progress.
3. Size, shape, and depth.
4. Multiplicity.
5. Character of base. Describe the specific induration as compared with that of common inflammation.
6. Character of surface.
7. Amount and character of discharge.
8. Liability to be associated with or followed by bubo.
9. Liability to be followed by constitutional symptoms.
10. Results of contagion or inoculation.
11. Liability to recurrence.

Of what is the specific induration of the primary sore the sign?

Is it a source of infection?

How long does the sore remain contagious?

State the usual length of time required for the healing of a chancre without treatment. With treatment.

Of a chancroid without treatment. With treatment.

Does the sore ever heal before the induration passes away?

Is the soft sore ever followed by constitutional disease?

Do secondary symptoms always follow the hard sore?

How does urethral chancre differ in this respect from those which are external?

Why this difference?

What bearing does this fact have upon the question of duality of poison?

What effect does inflammation have upon the contagious power of a primary sore?

What upon its infecting power?

How does the pain and tenderness of a chancre compare with that of a non-specific ulcer?

What is the literal meaning of the term Bubo?

What is the conventional use of the term?

How frequently does bubo follow a chancre?

How frequently does bubo follow a chancroid?

How is this difference explained?

How soon does bubo follow chancre? Chancroid?

Is bubo a part of primary or secondary syphilis?

Compare the bubo following the soft with that following the indurated sore with regard to:

1. Number of glands involved.

2. Rapidity of its course.

3. Liability to suppuration.

How is the syphilitic bubo to be diagnosed from a simple enlargement of the gland?

Is it always on the same side as the sore?

If not, explain how exceptions occur.

What is a "Bubon d'Emblee"?

How may it occur?

Does bubo attend chancre in any other locality than upon the genitals?

What is the first indication to be fulfilled in the treatment of the primary sore?

Is it the same both for hard and soft sores?

What are the best agents for destroying the specific surface?

What is the subsequent dressing?

Is the escharotic or caustic to be repeated?

If so, how often and how long?

What is the value of excision?

How are we to know when the sore has passed from a specific to a simple ulcer?

What is the value of local remedies for the removal of the induration?

Is it desirable or not to hasten this?

What are the agents best calculated to effect solution of the hardened base?

What is the constitutional treatment?

Are there any antidotal remedies for syphilis?

Explain the action of the more potent remedies in this disease?

What rules are to guide us in their exhibition, continuance, and discontinuance?

How does bubo differ from chancre?

How does its treatment differ from that for the primary sore?

Is it desirable or not to prevent suppuration?

If so, how is it to be done?

If suppuration occurs, what course is to be pursued both as to manner of opening the abscess and the subsequent treatment?

Does the constitutional treatment differ from that already described?

If so, how?

How soon, subsequent to the appearance of the primary sore, do secondary affections occur?

State the minimum, maximum, and average limits.

Are there prodromic symptoms, and if so, what?

State the various diseases that arise from syphilitic poisoning and the general order in which they appear in time.

State the different organs, tissues, and parts of the body, in the order usually affected.

Is there any explanation of the fact that eruptive diseases usually precede ulcers and affections of the bones?

How do various eruptive diseases arising from syphilis differ from the same class of affections produced by simple causes?

State these peculiarities for the syphilides both as related to objective and subjective symptoms.

State the same for mucous tubercles.

Where are they usually found ?

What are the peculiarities of the secondary ulcer ?

What is rupia ?

Of how much value is the "copper color" as a diagnostic sign ?

What is its most frequent locality ?

What group of affections constitute what is termed tertiary syphilis ?

Is there a distinct dividing line between secondary and tertiary diseases ?

What are the peculiarities of syphilitic diseases of the bones and fibrous tissues as contrasted with those of non-specific origin ?

What morbid conditions of the nervous centers, either functional or organic, may arise from syphilis ?

Does this poison ever invade the thoracic organs ?

If so, what morbid conditions obtain ?

Is any organ or tissue in the body exempt from the action of this poison ?

Is syphilis cured spontaneously ?

Is it a self-limited disease ?

If cured for the time apparently, is the patient liable to relapses ?

If so, for how long ; or, in other words, is there any limit to this liability ?

Is there any sure sign that the individual has passed beyond it ?

Is secondary syphilis contagious ?

If so, how ?

Does the discharge from a secondary sore produce a secondary or primary sore?

How may a diseased nurse communicate the disease to a healthy child?

How may the child poison the nurse?

May or not a healthy mother become syphilitic by conceiving offspring from a diseased husband?

May the foetus have syphilis *in utero*?

May the mother be poisoned through the semen?

If the child be poisoned by the nurse's milk, or the mother through the foetal circulation, what will the development be, primary or secondary?

What of the hereditary nature of syphilis?

Does one attack prevent the individual from a second?

Does the general management of the various syphilitic diseases differ from that of the same affections arising from simple causes?

In addition to this, what remedies are used as special eliminatives of the poison?

Compare carefully the different salts of iodine and of mercury in this respect.

What preparations of each agent are best as a rule?

Under what circumstances may they be alternated?

What is the guide for withholding them?

Is there any danger of abusing them? What?

What other remedies seem to have an especial eliminative action in this disease?

Does the treatment of the tertiary affections differ from that of the secondary?

If so, how?

Are there any particular tonics specially valuable in syphilis?

What is the value of vapor baths in this disease?

What kind of baths are best?

Is there any special local treatment for mucous tubercles?

If so, what?

For secondary ulcer?

If so, what?

For syphilitic nodosities?

If so, what?

Is it proper or not to institute the same operative measures for syphilitic caries and necrosis as for the non-specific forms if proper constitutional treatment is previously or contemporaneously carried out?

What is syphilization?

What is its object?

What results have been obtained from it?

What of its practicability as a general measure?

What is the effect of a seton or any issue in obstinate cases?

State, finally, in general terms, the dietetic and hygienic management of syphilitic patients.

POISONED WOUNDS.

How do tooth wounds (non-rabid) differ from other contused, lacerated, or punctured wounds inflicted by tooth-shaped instruments?

Is it proper to speak of these as poisoned wounds?

If any, what is the evidence that they are sometimes poisoned?

What evidence is there that anger may modify the character of the saliva?

That it may similarly affect other secretions as, for example, the milk?

May other powerful emotions affect the quality as well as quantity of various secretions?

Is it probable or not that the semen of the male and ovum of the female may be similarly impressed?

How does this noxious quality of the saliva affect the wound?

How the subsequent scar?

What is the proper primary treatment of the wound?

What is the subsequent management?

How should the troublesome scars be dealt with?

Name the various insects which inflict poisoned wounds, both for the temperate and tropical climate.

Describe the kind of wound and the apparatus by which it is inflicted, made by the mosquitoes; black-flies; fleas.

What conditions of the system render it obnoxious to suffering from these wounds?

Under what circumstances may they produce fatal inflammation?

Of what type will be the inflammation?

Are insects ever the vehicles for carrying septic material to sores or wounds? How?

What is the proper treatment for these wounds?

Give the anatomy of the sting of the common bee.

What is the fluid contained in the sac?

What is its chemical reaction?

What is the *modus operandi* of this poison?

Is it ever fatal?

If so, how does it kill?

What differences obtain in different individuals as to susceptibility to this poison?

Does season or climate affect its virulency?

How does the scorpion wound differ from the bee sting?

How the tarantula?

What difference in the two last in different climates?

Describe the general treatment for the several wounds of bees, scorpions, and tarantulas.

If serious inflammation follows, does it differ in character or in the treatment required from the same form of inflammation arising from other causes?

Name any articles that have a reputation as antidotes in these wounds.

Name the poisonous reptiles.

What countries are infested by the several varieties?

What are the favorite localities of the *crotalus*?

Describe the anatomy of its fang, and appendages.

Where is the virus situated?

What is the physical appearance of the virus?

Its chemical composition?

How is it affected by extremes of temperature?

By chemical re-agents?

How is the virulence of this fluid affected by season?
Age?

What effect does it produce upon a sound surface,
mucous or cutaneous?

How is it introduced into the wound?

Does the rattlesnake bite or strike?

What peculiarity in the structure of the fang renders
it possible for the reptile to inflict a wound with-
out poisoning it, and under what circumstances?

Does the quantity of the poison, other things being
equal, determine the severity of the symptoms?

May the virus be so weakened by repeated emptying
of the sac at short intervals as to render it harm-
less?

As an answer in a different form, to the last two
questions, state the conditions upon which the
gravity of a given case depends.

How soon does the poison develop symptoms?

How early do the worst cases prove fatal?

Describe a typical case of poisoning by snake-bite,
giving the symptoms, both local and general, in
the order of their appearance.

What local changes take place when the patient dies
within two hours?

What if life is prolonged two days?

What is the mode of death in the speedily fatal
cases?

What in those where the patient lives days instead of
hours?

What appearances are observed *post-mortem*?

Give the history of the milder cases which recover.

What facts, previously referred to, render it oftentimes impossible to judge of the merits of any plan of treatment in a particular case?

Is it possible always to determine whether the bite was poisoned or not?

If poisoned, is it possible to determine the degree of virulence, if the patient recovers?

What is the appropriate immediate treatment of the wound? Why?

What is the subsequent treatment?

What is the constitutional treatment?

In this connection, as in the local treatment, state the indications to be fulfilled and the remedies best calculated, so far as our knowledge goes, for the purpose.

Name some of the so-called "specifics" for snake-bites.

Is a system, once recovered from the effects of this poison, protected against its influence?

Compare the viper, elaps, cobra, and trigonocephalus with the crotalus with reference to structure, habits, virulence of poison, and treatment of the bites.

Define Rabies.

How does it differ from hydrophobia?

What animals are subject to idiopathic rabies?

Is hydrophobia ever a symptom of rabies in any of the lower animals?

Does it always attend rabies in the human subject?

What influence has climate or season upon the development of rabies?

Describe a fatal case of this disease as it occurs in the dog, giving the symptoms in the order of their succession.

What is the character of the delirium?

What is the average duration of the disease?

What is the mode of death?

What secretions contain the virus?

Does it produce harm if applied to a sound surface?

What effect does it produce upon birds when inoculated?

How is the fact explained that many persons bitten by rabid animals escape hydrophobia?

Is the wound from a rabid animal any more troublesome at first than a simple tooth-wound?

What is the length of the period of incubation?

Does this differ for different ages? Sexes?

Is it the same for the lower animals and man?

When hydrophobia appears does any change occur in the scar?

If so, what?

Describe the constitutional symptoms in regular order from first to last.

What is the duration of the disease?

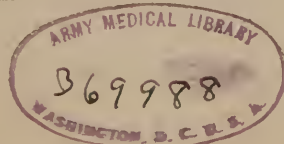
What is the mode of death?

Is it communicable from one human subject to another?

Is it curable?

What treatment should the wound receive at once?
Why?

Is there any remedy supposed to have, or proved to have antidotal power over this virus?



What is the most efficient palliative treatment for hydrophobia ?

Should or not the scar of wound be interfered with at the outbreak of the disease ?

If so, how ?

What is Glanders ? *

What is Farcy ?

By what other terms are these affections known ?

In what animals do they occur ?

What causes produce them ?

Are they contagious, or infectious, or both ?

How transmitted to man ?

What is the period of incubation ?

Describe the symptoms and course of the disease ?

What is the prognosis ?

Is it communicable from one human subject to another ?

From man to the lower animals ?

What is the treatment, local and general ?

DISSECTION WOUNDS.

As a rule, are dissection wounds poisoned or not ?

Under what circumstances are they most dangerous ?

Answer this question with regard to disease from which the cadaver died ; the length of time since death ; the character of the wound ; and the condition of the individual wounded as predisposing to septic disease.

* See Youatt on the Horse.

What is the danger from wounds received at ordinary post-mortem examinations as compared with those occurring in the dissecting-room? Why?

Does the injecting of the "subjects" with antiseptics affect the liability to poisoning?

What is the proper prophylactic treatment of the wound?

Compare, in this connection, irrigation, sucking, cauterization, and excision.

What is the period of incubation?

If local inflammation is developed, of what type is it?

If abscess forms, of what kind is it?

What is the character of the associated fever?

What is the prognosis in the majority of cases?

What is the mode of death?

Describe the general plan of treatment.

Describe the disease called Murrain.*

State the several ways in which it is communicated to man.

What is its form of development in the human subject?

What is its period of incubation?

Describe the rise and course of malignant pustule.

Is it single or multiple?

What associated and secondary affections are likely to arise?

What are the constitutional symptoms?

Do they, in this disease, differ essentially from septicæmic fever in general?

* See Youatt.

Do septic pustules arise from other causes?

Can they be distinguished from the malignant pustule?

If so, how?

Does the septic pustule ever arise without contagion?

What is the treatment?

TRAUMATIC ERYSIPELAS.

Describe Erysipelas in general terms.

What conditions of the system predispose to traumatic erysipelas?

Is it a local or constitutional disease?

What is meant by phlegmonous erysipelas?

What is the character of the pus?

Is it circumscribed?

Is it contagious? Infectious?

How nearly does it resemble hospital gangrene?

Does the one ever produce the other?

What relationship between phlegmonous erysipelas and puerperal fever?

What is the evidence?

What is the duty of the surgeon in this connection?

What are the leading indications in the general treatment?

What are the principal remedies for fulfilling these indications?

What are the prominent indications in the local treatment?

What is the value of free incisions in this disease?

Early, or not?

Why is it often difficult to detect the presence of pus?

When in doubt as to its presence, which is the most prudent course, to cut or wait?

What subsequent dressings?

What caution about contagion?





PART SECOND.

SPECIAL SURGERY.

SURGERY OF THE SKIN.

Name the principal morbid growths which affect the skin and subjacent cellular tissue.

What is the structure of a common Wart?

What is the technical name?

What parts of the body are most frequently affected?

At what age are they most common?

Are they permanent or transient, as a rule

What causes are known?

Do they ever assume a malignant character?

Do they generally require treatment?

What are the best local medicinal remedies?

What are the best methods of destruction or removal?

What is meant by the verrucous diathesis?

What internal remedies overcome it?

How does a Corn differ from a wart?

Is there any difference in structure between a hard and a soft corn?

If so, what?

What causes produce corns?

What evils do they produce?

Does the removal of the cause always cure ?
If not, what are the best palliative measures ?
What are the best modes of extirpation ?

What are Moles ?
Congenital or acquired ?
Where most frequently situated ?
Dangerous or not ?
How are they to be removed ?
When is an operation justifiable ?
Are there any growths on the skin corresponding to
polypoid tumors of mucous membranes ?

What is a Wen ?
To what class of hypertrophic growths do wens be-
long ?
What causes produce them ?
On what part of the body most frequent ?
At what age most common ?
What size do they attain ?
How are these sebaceous tumors diagnosed from oth-
er cysts ?
How does the thickness of the sac vary in different
localities ?
How do the contents vary ?

What is a Dermoid Tumor ?
What is the appropriate treatment for sebaceous tu-
mors ?
Are they likely to recur ?
Are they hereditary ?

What are moluscous tumors?

Whence the name?

Give the structure; size; shape; location; tendency.

Occur in what subjects?

Are they ever malignant?

What is the treatment?

At what age is simple Hypertrophy of the skin usually seen?

In what parts of the body most common?

Does it ever require treatment? What?

How does this affection differ from elephantiasis?

State carefully, in this connection, the influence of the different elements, hypertrophic and inflammatory, in producing the elephantine enlargement.

Name the different varieties of elephantiasis.

Why so called?

What influence does climate or race have upon its development?

What parts of the body are affected?

To what degree sometimes?

What is the condition of the blood-vessels in the affected part?

To what forms of acute inflammation is the part subject?

What other forms of suffering arise from it?

Is it ever fatal?

Can it be cured without surgical operation?

If so, how?

What are the best palliative measures?

What is the effect of ligaturing the main supplying artery?

Under what circumstances is amputation or excision to be performed?

Is it likely to return?

Is it hereditary?

What portions of the cutaneous surface are most frequent seats of epithelioma?

Whence the name?

Describe its appearance in its first stages?

Is there more than one form?

With what diseases is it likely to be confounded?

How is it to be distinguished from them?

What is the relationship of epithelioma to true cancer?

What is the proper treatment?

Describe and compare with one another the several affections known as Keloid, Eiloid, and Lepoid.

Compare these with epithelioma.

What is the treatment for such form of disease?

What is meant by Lupus?

What two varieties?

State whether or not the two shade into one another?

Describe the rise and progress of each variety, comparing carefully with one another?

Is lupus ever cured spontaneously?

How does it differ from the skin diseases previously described?

What is the best palliative treatment?

What is the best radical treatment ?

In the radical treatment of the several diseases under consideration, compare the treatment by cauterization and by excision, and state under what circumstances the one plan is to be pursued in preference to the other.

What is a Furuncle ?

What is the common name ?

How does its pathological anatomy differ from that of the abscess ?

How is the one to be diagnosticated from the other ?

What is the "cone" of the boil ?

Name the most frequent causes.

Explain the action of these causes in producing this disease.

At what age are the most common ?

What foundation is there for the popular notion that boils are healthy ?

To what extent, if any, is it correct ?

Is it possible to abort a furuncle ? How ?

How early must the abortive treatment be instituted to be successful ?

What is the ordinary local treatment ?

How does the constitutional treatment vary in different cases ?

What is the technical term for Carbuncle ?

How does it differ from a furuncle in size ? Shape ?

Appearance generally ? Age and general condition of the patients ? Location ? Rapidity of progress ? Danger ?

What is the type of constitutional disturbance ?

What is the character of the pain ?

What the mode of death in fatal cases ?

State the best plan of constitutional treatment.

What are the best tonics in this disease ?

What is the value of cathartics ?

What kind should be used, if any ?

What is the value of opiates ?

Describe the proper local treatment.

To what extent are poultices useful in this affection ?

What danger of their abuse ?

What is the *modus operandi* and what the value of early free incisions ?

In what manner and to what extent are they to be made ?

When are stimulating dressings indicated ?

What particular remedies of this class are best ?

What is the difference between a Burn and a Scald ?

In what way are they classified ?

What peculiarities about the shock dependent upon severe burns ?

Upon what does the severity of the shock from burn depend ?

Compare, in this connection, extensive superficial burns with those of small surface and great depth.

In what several ways, either immediately or ultimately, do these injuries destroy life ?

In external burns what danger of internal inflammations ?

Explain this tendency.

What causes the peculiar pain?

What peculiarities pertain to ulcers following burns?

What to the scars?

Explain these peculiarities both for the ulcers and the scars.

What is the appropriate treatment for the shock?
Why?

What are the two indications to be fulfilled in the local treatment?

What are the most important modes of fulfilling these indications?

State the *modus operandi* and the comparative therapeutic value of the following agents in the local treatment of burns, and when the one in preference to another should be employed, having reference to the degree of the injury, age, and strength of the patient, etc.; ice, water dressing, cold or warm, and how applied; oil, what kinds; cotton-wool; carron oil; flour; dry heat; alcohol; soap; creosote; turpentine; carbolic acid; glycerole of bismuth.

How does the treatment of the ensuing ulcers differ from that employed for chronic ulcers arising from other causes?

What care should be exercised about the position of inflamed parts, and why?

Under what circumstances is tetanus most likely to follow a burn?

What especial care should be exercised in dressing the sore with reference to this danger?

What is the technical name for Frost-bites?

What for Chilblains?

How may a part be frozen and thawed again without injury?

What is the test of safety in thawing a part?

Why is it that freezing is generally followed by sphacelus, gangrene, or inflammation?

How does sphacelus differ from gangrene?

State under what circumstances each of the three conditions named will follow the chilling of the part.

Does the mortification from freezing differ in its history from that induced by other causes?

Are there any peculiar symptoms attending the inflammations or ulcers following frost-bites?

If so, what?

What is the proper care for the gangrenous part?

What for the chilblain?

When are hot and when cold applications proper?

When are stimulating and when are sedative lotions advisable?

SURGERY OF MUSCLES AND TENDONS.

Define Myositis.

What are the causes?

What are the results of this affection if not early overcome?

What is the general plan of treatment?

What causes induce fatty degeneration of muscle?

What other organs are usually affected contemporaneously?

How may this affection be diagnosticated?

To what accidents does it predispose?

What is the appropriate treatment for fatty degeneration?

What is meant by muscular spasm?

What is a tonic spasm?

What is a clonic spasm?

What causes produce spasmodic affections of muscles?

What is the difference between a contracted and a contractured muscle?

Under what circumstances does the first condition pass into the second?

Give examples of reflex contraction of muscles.

Give examples of contraction from centric causes; excentric.

What is the general plan of treatment for contracted muscles?

For contractured muscles?

Under what circumstances is myotomy advisable?

What causes produce rupture of muscles?

Is complete rupture common or rare?

How is it with partial rupture?

What muscles are most frequently injured in this manner?

What are the symptoms?

What is the treatment?

What is the prognosis?

Is muscular fibre ever restored in these cases?

If not, what is the bond of union?

What morbid growths are found in muscles?

What is meant by Thecitis ?

Is it usually acute or chronic ?

What are the causes ?

How is this affection diagnosed ?

Describe the "painful crepitation" of tendons.

Whence the name ?

How are the symptoms explained ?

What is the appropriate treatment for these affections ?

What is a Ganglion ?

What are the causes ?

What the most frequent localities ?

What class of people are most subject to them ?

What size do they attain ?

What are the contents ?

How is the great variation in the contents explained ?

How is the ganglion diagnosed from other forms of encysted tumors ?

What harm comes from it ?

What are the various methods of treatment ?

Of these, which are the best ?

Is there any considerable danger in interfering with these growths with the knife ?

Which is most liable to rupture under a given degree of violence, the tendon or its muscle ?

In cases of contraction, which is usually in fault, muscle or tendon ?

Why is tenotomy usually preferable to myotomy ?

Under what circumstances is tenotomy justifiable ?

Describe the mode of repair of tendons from the first exudation of the lymph to the restoration of the function of the tendon.

How does it differ for open and subcutaneous wounds?

How far may the divided ends separate and yet unite?

Is the tendinous fibre reproduced?

What is the size of the new tendon as compared with the old?

Can the one be distinguished from the other histologically after the repair is complete?

How long time is usually required to effect complete union and complete freedom of the tendon in its sheath?

What difference obtains between tendons in the upper and lower parts of the body as regards tendency to unite?

How is this difference explained?

When the tendons of important muscles are divided accidentally, what is the treatment both in open and closed wounds?

Is it ever proper or necessary to suture tendons?

If so, when and where?

Describe the proper method.

How are the stitches removed?

Is it ever practicable to restore the functions of a muscle whose divided tendon has failed to unite by resection of the ends and suture?

If so, describe the operation.

How soon after the accident must the operation be performed to be successful ?

Why so soon ?

SURGERY OF NERVES.

What is the difference between *contusion* and *concussion* of a nerve ?

What are the signs of each injury ?

What the ulterior results ?

What is the treatment for either condition ?

What are the local effects of punctured wounds of nerves ?

How should they be managed ?

What is the result of partial division of a nerve ?

Suppose, for example, one-half of the sciatic nerve is divided, what will be the immediate effect ?

What the ultimate results ?

How will the symptoms and ultimate effects differ if several inches of one-half its diameter is excised ?

Will the nerve-trunk unite when completely divided ?

If so, under what conditions ?

How do nerves compare with tendons in this respect ?

How far may the cut ends be separated and yet unite ?

Is the nerve fibre restored ?

Is the function of the nerve ever restored unless the normal structure is reproduced ?

What is the treatment for divided nerves ?

Under what circumstances is it proper to suture the divided ends ?

Should the stitches include nerve substance or neurilemma only? Why?

What material for sutures? Why?

Why the difference between the methods of stitching tendons and nerves?

Is it ever practicable to restore the functions of a divided nervous trunk, which has failed to unite, by resection and sutures?

If so, under what circumstances, and how is the operation performed?

What is a neuroma?

Describe its structure.

How diagnosed?

How does it differ from the painful subcutaneous tumor?

Does it ever assume a malignant character?

What is the treatment?

How should the nerve be treated after the tumor is excised?

What is Tetanus?

What is the pathognomonic symptom?

Which is more frequent, traumatic or idiopathic tetanus?

Which the most fatal?

What causes produce the latter?

What class of wounds is most likely to be followed by tetanus?

Is it liable to follow any wound?

What are supposed to be predisposing causes?

State these as regards individual conditions, climate, temperature, and epidemic influence.

How soon, ordinarily, after the injury does this disease supervene?

What are the first signs of its approach?

Describe carefully the rise and progress of the disease to a fatal termination.

What is the prognosis in traumatic cases?

How soon does death occur?

What is the mode of death?

What is known of the essential nature of this disease?

What changes take place in the wound?

What is the best general plan of treatment?

What special remedies are the most potent in palliating or curing this affection?

What treatment should the wound receive?

Does one attack exempt the surviving patient from a second?

What is the treatment for idiopathic tetanus?

What is Neuralgia?

What morbid sensations may be properly embraced by this term?

What is meant by centric neuralgia?

What by eccentric neuralgia?

What by reflex neuralgia?

Give examples of each variety.

Is it a sthenic or asthenic form of disease?

State the general plan of treatment for each form of the disease.

SURGERY OF THE LYMPHATICS.

What is the technical name for inflammation of a lymphatic vessel?

What for inflammation of a lymphatic gland?

What are the exciting causes of acute inflammation of these organs?

What are the symptoms?

How diagnosed from phlebitis?

What is the type of symptomatic fever?

What is the treatment?

What causes produce the chronic inflammations and enlargements of lymphatic glands?

Is suppuration frequent?

Is it as a rule desirable?

If it occurs, what is the character of the abscess?

What are the indications to be fulfilled in treating these enlargements?

What are the best remedies?

What is Leucocythemia?

What causes produce it?

What is a leucocythemic tumor?

Do the glandular enlargements stand in the relation of cause or effect to the excess of white corpuscles in the blood?

What is the evidence?

Is it advisable or not to remove these tumors?

What is the constitutional treatment for leucocythemia?

Are lymphatic glands often the seat of malignant disease?

SURGERY OF BLOOD-VESSELS.

ARTERIES.

Define Arteritis.

Is it usually a local or general affection?

Is it frequent or rare?

What causes produce it?

What are the symptoms?

What is the danger from this affection as compared with phlebitis?

What is the treatment?

Name the general forms of arterial degeneration.

Which is the most frequent?

What arteries are most frequently affected?

What causes underlie these degenerations?

To what diseases do they predispose the patient?

What is embolism?

What is its relationship to arterial degeneration?

Is true bone ever deposited in the coats of an artery?

By what signs or symptoms are the various degenerations of arteries recognized?

By what therapeutical measures are these conditions arrested or removed?

What is an Aneurism?

What is meant by a true aneurism?

Name the several varieties of true aneurism.

Define each.

What localities are the favorite seats of each variety?

What are the predisposing causes of aneurism?

What are the exciting causes?

What are the symptoms?

How is a differential diagnosis made between an aneurism and an abscess?

Between it and other morbid growths in the region of an artery?

What are the peculiarities of the bruit?

Give the clinical history of aneurism to a fatal termination.

In what several ways may it produce death?

Why is it that all tissues yield and absorb by aneurismal pressure?

Under what circumstances does pressure produce thickening of parts instead of absorption?

Is aneurism ever cured spontaneously?

If so, how?

What is the *modus operandi* of inflammation in curing aneurism?

State the different results which follow the different grades of inflammation in aneurism.

Is it dangerous or not as a rule?

By what constitutional plan of treatment may aneurisms be cured or palliated?

Describe the method known as Valsalvas.

What is the philosophy of it?

How much reliance can be placed upon it?

Compare, in their differential values, the following surgical expedients for the cure of aneurism, and state the philosophy of each: manipulation; pressure upon the tumor with flexion when practicable; injection of persulphate of iron (how performed); galvano cautery (method of appli-

cation); digital or instrumental compression of the artery on cardiac side, (how made and how long continued); acupressure; ligation of artery on distal side or cardiac side; of nearest main branch on distal side.

What names are associated with these several modes of ligation?

What is the danger from ligation?

How is the extremity nourished after the ligation of the main artery?

What are the signs of arterial hemorrhage?

How diagnosed from venous hemorrhage?

How do incomplete wounds of an artery affect the persistence of the hemorrhage as compared with complete division?

What advantage may be taken of this fact in treatment?

Describe carefully the spontaneous arrest of hemorrhage from a wounded artery.

What conditions favor it?

Describe the subsequent process of healing of the divided vessel.

What effect has syncope upon hemorrhage? Why?

As a rule, what arteries may be trusted to close spontaneously?

What are the simplest temporary means of controlling hemorrhage?

In the treatment of a wounded artery, state the value and *modus operandi* of position, pressure, cold, air, styptics (compare alum, tannin, matico, the

various stimulants as alcohol, turpentine, &c., and iron in its several forms). Torsion (how performed and how far to be trusted). Acupressure (the several methods, and how far admissible, and how long to be maintained). Deligation.

Of what materials may ligatures be made ?

Which is the best ?

Describe the manufacture of ligatures. Twisted hard or loosely ? Waxed or not ? Why ?

How large a ligature is needed for the carotid ? Femoral ? Temporal ? Brachial ? Radial ? Digital ? Facial ?

Describe a good artery forceps.

How is the artery to be seized ?

What care about disturbing it in its sheath ?

When is a tenaculum to be preferred to the forceps ?

Describe the proper mode of tying the artery ?

How tightly should the ligature be drawn ?

Describe the process of separation and healing.

How long time is required, on the average, for a ligature to separate from the digital arteries ?

From the brachial ?

From the femoral ?

Why are both ends of a large artery tied ?

Why is hemorrhage from the palmar arches especially difficult to control ?

What is the *dernier resort* in these cases ?

What is the effect of a clot in a wound as regards liability to hemorrhage ?

What are the predisposing causes of secondary hemorrhage ?

What are the exciting causes?

About how soon after the receipt of the wound does it occur?

What difficulties in the way of treatment?

Must the vessel be secured if practicable in the wound?

If not, what is the proper course?

VEINS.

Define Phlebitis.

What is meant by adhesive phlebitis?

What by suppurative phlebitis?

Is adhesive phlebitis, as a rule, dangerous or not?

Under what circumstances is it invoked as a curative measure?

What causes predispose to and excite suppurative inflammation of veins?

Why is it more dangerous than suppurative arteritis?

State in this connection all the known causes which produce an aplastic condition of the blood.

Define and compare with one another septicæmia, pyæmia, ichoræmia.

How are these affections diagnosed?

Which condition is most frequent?

What, as a rule, is the effect of laudable pus introduced into the veins?

In what way may the laudable pus corpuscle do harm?

What is the type of septicæmic fever?

Detail the symptoms of an ordinary case.

Explain the formation of multiple abscesses.

What organs are most frequently the seat of these formations?

Why often difficult of diagnosis?

State the general plan of treatment, both local and general, for suppurative phlebitis?

What particular remedies are to be especially relied upon in this disease?

Define Varix.

What veins are most frequently affected? Why?

What are the causes?

What are phlebolites?

With what other affections may varicocele be confounded?

How is the differential diagnosis made?

What is the best palliative treatment for varicocele?

Under what circumstances is radical treatment advisable?

What is the danger?

To what preliminary treatment should the patient be subjected?

What are the several modes of treatment for radical cure?

Compare styptics, injections, acupuncture, galvano-cautery, excision, and the several methods of ligation, stating the differential values of each.

How is venous hemorrhage distinguished from arterial?

Which is most difficult to control?

Compare the various means of controlling it with those employed in the treatment of arterial flux.

Is it proper to ligate veins ?

If so, when ?

Is there any objection to ligating them as compared with arteries ?

If so, why ?

State particularly, in this connection, whether veins are more prone to suppurative inflammation, from the same causes, than arteries.

What effect is produced by the entrance of air into veins ?

How is this explained ?

In what localities is this accident most likely to happen ?

What are the signs ?

How is it to be avoided ?

What is the proper treatment ?

What is a Vascular Tumor ?

What is an erectile tumor ?

"Aneurism by anastamosis" ?

What are nevi materni ?

Are these usually congenital or acquired ?

Is any cause known for the congenital development ?

When acquired, what causes produce them ?

Where most frequently located ?

How do they vary as regards the proportion of arterial, venous, and capillary elements ?

Encysted or not ?

Under what conditions may the differential diagnosis be difficult ?

How made ?

Do these tumors generally attain a large size or not?

What is the danger from them?

When is radical treatment justifiable?

What are the several methods of most value?

State under what circumstances the one is to be preferred to another, comparing pressure, excision, caustics, injections, acupressure, actual cautery, ligation, etc.

What is varicose aneurism?

What is aneurismal varix?

Do these conditions require operative measures?

If so, what?

What is meant by Hemorrhagic Diathesis?

How is it explained?

Is it congenital or acquired?

Hereditary or not?

More common in men or women? Colored or white people? In hot or cold climates?

Can it be recognized by any signs before the patient suffers hemorrhage?

What precautions should the surgeon take in view of this fact?

What treatment is proper?

How much is to be expected from treatment in overcoming this diathesis?

What are the appropriate measures for controlling capillary hemorrhage?

SURGERY OF BONES.

Define Rachitis.

What is the common name for it?

Of what age is it an affection?

Is it self-limited or not?

How long does it continue?

What is its relation to scrofula?

What is its relation to hydrocephalus?

What are the diagnostic symptoms?

What is the differential diagnosis between rachitis and malacosteon?

What bones are most frequently affected?

What are the most common deformities resulting?

Why?

What is the best general treatment?

Why is it difficult to determine the value of medicinal treatment?

What prophylactic management is necessary to guard against deformities?

What is the proper treatment of distorted bones?

MALACOSTEON.

What other names are given to this disease?

Give its pathology.

Compare it carefully with rachitis, with reference to the pathological conditions of the bones, age and sex of patient, symptoms and prognosis.

What are the causes?

What is the appropriate treatment?

What is meant by fragilitas ostium?

Compare this affection, in its etiology, pathology, symptomatology, and therapeutics, with rachitis and simple inflammatory softening.

Define Acute Periostitis.

Is it usually traumatic or idiopathic?

What are the most frequent causes of the idiopathic variety?

What bones are most liable to this disease?

Detail, carefully, the symptoms.

How is the intensity of the pain explained?

With what other diseases is it liable to be confounded?

How is the differential diagnosis to be made?

Describe the progress of this disease when left to run its natural course, and state the usual results.

What is the best abortive treatment?

Why is it especially necessary that the treatment be early and decided?

When, from loss of time, or from the locality of the inflammation, abortive treatment is impracticable, what course should be pursued?

State any peculiarities pertaining to abscesses following acute periostitis.

What causes produce Chronic Periostitis?

Compare, in this respect, scrofula, rheumatism, gout, syphilis, the abuse of mercury, and any other causes that are known.

What bones most frequently suffer?

What results follow?

What is the structure of the resulting nodosities?

Is the treatment, as a rule, to be especially local or constitutional ?

What is the best general treatment ?

What is the best local treatment ?

Define Osteitis.

How does it compare in frequency with the two diseases last named ?

How in etiology ?

How to be distinguished from them ?

Is it usually acute or chronic ?

State the various morbid changes effected in the osseous structure by this inflammation.

Do bones recover from inflammatory softening ?

What is the appropriate treatment ?

Define Endosteitis. Osteo-myelitis.

Under what circumstances is it most likely to occur ?

Is it easily diagnosed or not ?

What relation does it hold to erysipelas ?

To hospital gangrene ?

What are the diagnostic symptoms ?

What is the chief danger ?

What is the best treatment ?

What is meant by hypertrophy of bone ?

Does mere increase in size constitute hypertrophy ?

May it be partial, or does it always involve the whole bone ? (Is there any apparent tendency to symmetrical disease of bones ?)

What causes produce hypertrophy ?

Is there any special treatment indicated beyond the removal of the producing causes?

If so, what?

Define atrophy of bone.

What is meant by excentric atrophy?

What by concentric atrophy?

What several causes produce this condition?

To what accidents does it predispose?

Is a fragile bone always atrophied?

Is an atrophied bone always fragile?

What are the indications for the treatment of ossific atrophy?

What are Osteophytes?

Where usually found?

What causes produce them?

What are the diagnostic symptoms of abscess of bone, both local and constitutional?

What are the common causes?

What bones are the most frequent seat of abscess?

What is the size as compared with abscess of the soft parts?

What peculiarities about the pus?

How is the gravity of the symptoms in proportion to the amount of pus to be explained?

What is the proper method of evacuating the pus?

What the after treatment?

What is the average prognosis?

Define Necrosis.

Is this term applied to any other than bony tissue?

What are the causes of necrosis ?

When is the slough called "exfoliation" ?

When "sequestrum" ?

What is meant by "involucrum" ?

Give the ordinary history of the separation of the slough and its inclosure in involucrum.

What circumstances determine whether the slough shall be an exfoliation or a sequestrum ?

What is the average length of time required for the formation of an involucrum ?

What appearance do the parts then present ?

Is there anything peculiar about the appearance of fistulous openings communicating with dead bone ?

What is the popular term for these sores ?

State what of truth and of falsehood there is in the popular ideas pertaining to the origin and pathological significance of this affection.

Do sequestra absorb ?

What is the general condition of patients suffering from necrosis ?

How is this explained ?

Is it advisable or not, as a rule, to operate for the removal of the necrosed bone ?

State the arguments for and against it.

What is the average prognosis as regards the health of the patient ?

What, as to the future condition of the limb ?

What is the general mode of operating, and what are the necessary instruments therefor ?

What caution about saving periosteum ? Why ?

What about destroying involucrum?

Is it true bone?

What becomes of it?

To what extent is reproduction of bone possible when the periosteum is saved?

When it is not?

What is the condition of the periosteum in these cases?

What is the proper after treatment?

By what process do exfoliations of bone reach the surface and extrude spontaneously?

When retained in the tissues, what is the value of the plan of dilating the fistulæ for their removal?

What agents may be employed for this purpose?

Is there any danger connected with the dilatation of old fistulæ?

If any, what?

How may it be measurably obviated?

What is meant by caries of bone?

What is the difference between caries and necrosis?

What is necrotic caries?

How does caries of bone compare with ulcer of the soft parts?

Compare caries with necrosis, with regard to etiology, both local and constitutional; symptomatology.

State, carefully, the differential diagnosis.

What is the probability of spontaneous cure as compared with necrosis?

Do ulcers of bone heal by the same process as ulcers of soft parts?

If not, what is the difference?

What is the treatment of caries, both local and constitutional?

State, in this connection, how the treatment differs from that of ulcers of the soft tissues, and why.

State the various plans of local treatment, from the simplest to the most radical, and give the reasons therefor.

State the circumstances under which amputation is proper either in necrosis or caries, or both combined.

MORBID GROWTHS OF BONE.

To what morbid growths are the osseous structures liable?

Is this tissue most obnoxious to benign or malignant tumors?

What varieties of malignant growths are most frequent?

What are the several forms of exostoses?

Have these the structure of true bone?

How diagnosticated from other growths?

How to be dealt with?

How does the treatment of the morbid growths of bony structures differ, in general, from that of the same disease of other tissues?

What circumstances, as a rule, will decide between excision of a bony tumor and amputation of the part?

In amputation for the removal of a tumor connected with bone, what points are to determine between amputation in continuity and disarticulation?

Is Neuralgia of Bone frequent or not ?

What are the causes ?

How diagnosticated ?

How to be treated ?

INJURIES OF BONE.

BENDING AND FRACTURE.

At what age do bones bend, under violence, instead of breaking ?

How is this explained ?

What bones are most prone to this injury ?

Do flat bones ever become indented under like circumstances ?

Is there tendency, or not, to spontaneous recovery from bending of long bones ?

How is it with flat bones ?

Is the "bending" usually accompanied with partial fracture or not ?

Is it possible to straighten bones like the radius and ulna, in a healthy subject, without fracture ?

What are the probabilities ?

What is the treatment of these cases ?

What is meant by Diastasis ?

What is meant by fracture ?

Is this term applied to any other than osseous structures ?

What are the corresponding terms for solutions of continuity of soft parts ?

Define partial fracture ; complete ; transverse ; oblique ; longitudinal ; simple ; compound ; comminuted ; complicated ; single ; multiple ; impacted.

Under what circumstances may a partial fracture become complete ?

What importance attaches to this fact ?

May an impacted fracture become non-impacted spontaneously, and if so, how ?

What are the predisposing causes of fracture ?

What are the exciting causes ?

What are the general signs of fracture ?

State under what circumstances either of the usual symptoms may be wanting.

In an ordinary fracture of a long bone, the fragments being properly adjusted, give the history of repair in the following order :

What occurs during the first week or ten days ?

What is the proper material for repair, and whence derived ?

Does any part of the traumatic exudation enter into this process, and, if so, under what circumstances, and what is its comparative histological value ?

Upon what does the amount and quality of the reparative exudate depend ?

What is meant by provisional callus ?

What by internal callus ?

What by intermediate callus ?

What by definitive callus ?

What proportion does provisional callus bear to that which is permanent?

Under what conditions do we find the greatest, and under what the least amount of ensheathing callus?

How is this difference explained?

Describe the organization of the callus.

How much of the provisional callus becomes definitive?

What is the average length of time for the perfection of the callus?

Does the latter become true bone or not?

What difference does the position of the fragments make in the amount of definitive callus?

State the facts in this connection for perfect coaptation, overlapping, and obliquity, with and without contact of the ossific and periosteal surfaces?

State both the best local and constitutional conditions for perfect union.

On the other hand, what are the causes of non-union?

What is the morbid anatomy of the parts in non-union?

State these in detail, both local and general.

What is meant by vicious union, or by a vicious callus?

What are the various causes?

What is the danger in these cases?

Is inflammation essential or not to the most perfect repair of bone?

If so, why, and what degree?

How do the several grades of inflammation affect the plasticity of lymph?

Remembering the various causes of non-union, and assuming proper apposition of the fragments, state the *modus operandi*, the proper method of using, and the comparative value of the following measures for relief: friction of the fragments, seton, drilling, wiring, excision.

Under what circumstances is it advisable and when is it improper to refracture a badly united bone?

GENERAL INDICATIONS IN THE MANAGEMENT OF FRACTURES.

As a rule, should fractures be reduced immediately or not?

State the reasons for and against early reduction.

Does the same rule apply for long, flat, and irregularly shaped bones?

In flat and irregular bones, what is the tendency to re-displacement as compared with long bones?

Why this difference?

In fractures of long bones, what is the main indication for retentive treatment?

State in this connection the comparative value of simple extension and lateral pressure by splints as retentive measures.

How do the indications vary when surrounding muscles are destroyed or rendered powerless?

What are the various methods of making extension?

State the simplest and best.

- What are the most appropriate materials for splints?
- What is the comparative value, in different cases, of wood, paste-board, wire-webbing, sole-leather, gutta-percha, starched bandage, and plaster of Paris?
- What is the best method of lining splints?
- By what means are splints best confined?
- What danger about tight bandaging?
- When is it best and when unadvisable to bandage the limb before the application of splints? Why?
- If simple extension is employed, is bandaging necessary or not?
- Is there or not any foundation for the popular belief that a broken bone must necessarily be painful, especially during the period of "knitting"?
- Are fractures generally painful when perfectly adjusted and judiciously dressed?
- Is antiphlogistic after treatment usually necessary?
- If so, is it ordinarily general or local?
- What objection to the common plan of "wetting the parts" with various lotions?
- What is the value of anodynes in the treatment of these injuries?
- What is the guide for their use?
- State the value of anæsthetics in examining and reducing fractures?

SPECIAL FRACTURES.

BONES OF THE FACE.

- Is fracture of the nasal bones comparatively frequent or rare?

How does this accident compare, in frequency, with laceration of the cartilage or its separation from the bones?

What is the most frequent point of fracture of the *ossa nasi*?

How does the liability to fracture vary between the basal and terminal portions of these bones?
Why?

What are the causes?

What are the diagnostic symptoms?

Is the septum usually involved in the injury or not?

How is this complication diagnosticated?

What is the best treatment?

Compare the differential value of the several plans recommended by leading authors.

What length of time is ordinarily required for consolidation?

What are the common causes of fracture of the Superior Maxillæ?

Can these bones be fractured by muscular action?

Answer the same questions for the zygomatic and malar bones.

Are these injuries usually simple or compound?

How are the fractures of these several bones recognized?

How reduced?

When reduced, what is the comparative tendency to displacement? Why?

Is any retentive apparatus necessary or applicable for the malar or zygomatic bones?

If so, when and what?

State the various retentive measures suitable to the upper jaw.

How should displaced teeth be managed?

What is the prognosis when teeth are separated entirely from the bone?

What causes usually produce fractures of the Inferior Maxilla?

Is muscular violence ever sufficient?

If so, under what conditions?

Are these fractures usually single or multiple?

Oblique or transverse?

Compound or simple?

At what points most frequent? Why?

What is the comparative tendency to displacement?

How diagnosticated?

State the various methods of treatment from the more simple to that required for the most complicated cases?

What is the value of an inter-dental splint?

How made and applied?

How is the patient nourished in the cases of fractured maxillæ?

How soon do these fractures unite?

CLAVICLE.

What is the office of the clavicle?

In what different ways is it fractured?

What are the most frequent points of fracture?
Why?

- Are these fractures usually transverse or oblique?
What are the symptoms?
What causes produce the characteristic deformity?
Does this injury ever occur without deformity?
If so, how then diagnosticated?
What are the indications in the treatment?
By what means are these indications fulfilled?
State the several methods in most frequent use, and
their comparative value.
What is the object of the axillary pad which is generally used?
Are there any objections to its use?
Is it necessary?
If so, why? if not, why not?
What is the prognosis as regards deformity?
What time is requisite for cure?

SCAPULA.

- Are fractures of the body of the scapula frequent or rare? Why?
What causes produce them?
Are they attended with much or little deformity?
Why?
Difficult of diagnosis or not? Why?
When the injury involves the spine of the scapula,
is the difficulty of diagnosis increased or diminished?
State the treatment.
How are fractures of the acromion produced?
How do fractures of the tip of the acromion, *i. e.*
external to the acromio-clavicular articulation,

compare in importance with those of that portion internal to the articulation?

State the diagnosis between the two varieties of fracture.

What is the distinction between the anatomical and surgical neck of the scapula?

In fractures of this portion of the bone, is it the anatomical or surgical neck that is injured? Why?

What causes produce it?

Are these fractures usually single or comminuted?

State the differential diagnosis between fractures of the acromion and the neck of the scapula.

Between both and fractures of the clavicle.

State the appropriate treatment for fractures of the acromion and scapular cervix, and compare it with that for fractured clavicle.

State the causes, diagnosis, and treatment of fracture of the coracoid process.

Are these injuries frequent or rare?

Do these fractures unite by osseous or fibrous tissue?

What is the prognosis in the several fractures of the scapula?

HUMERUS.

At what point is the Humerus most frequently broken?

State the causes which produce fracture of the several portions of this bone, comparing the head, surgical and anatomical neck, middle third, and the condyloid region.

What are the signs of a fracture of the middle third?
How do these differ from those indicating a fracture
of the surgical neck?

Why the difference in symptoms?

Which is most frequent, fracture of the surgical or
anatomical neck? Why?

At what age is the latter most frequent? Why?

Is solution of continuity at the anatomical neck
usually a fracture or a diastasis?

How are fractures of the surgical and anatomical
neck to be distinguished?

How are fractures of the tuberosities diagnosed?

What is a supra-condyloid fracture?

What is an intra-condyloid fracture?

State the diagnosis of each.

What are the signs of fracture of the external con-
dyle?

What of the internal condyle?

Which is most frequent?

Give the proper treatment for fractures of the middle
portion of the bone.

State how this treatment should vary for fractures of
the neck (surgical or anatomical) tuberosities
and condyles, and why.

State the prognosis for these several injuries with the
reasons therefor.

RADIUS AND ULNA.

What causes generally produce fractures of the bones
of the fore-arm?

What circumstances render fractures of the ulna alone easy of diagnosis?

Where most frequently broken?

How is the olecranon process broken?

What are the symptoms? Why?

What the prognosis?

What the treatment?

What are the signs of fracture of the shaft of the ulna?

Where is the radius most often broken? Why?

At what points is the injury most easily recognized? Why?

What is meant by "Colles fracture"?

What by "Barton's fracture"?

State the etiology and the peculiar deformity of these special forms of injury.

How is it possible to determine a fracture of the upper third or fourth of the radius?

State the general diagnosis when both bones are fractured?

At what point is this injury most likely to occur?

State the causes which produce the several elements in the deformity.

What are the indications to be fulfilled in treatment where both bones are broken?

How are these fulfilled?

State in this connection the value of simple extension and how it may be made; the value of splints, of what material, their number, width and length.

Should an interosseous pad be used? Why or not?

State whether the fingers and thumb should be confined or left free, and why.

Should the limb be bandaged before the splints are applied? Why or not?

Should the hand or the whole fore-arm be supported by a sling? Why?

How does this compare with the support in case of a fractured humerus?

Why the difference?

How does the treatment of a fracture of either radius or ulna alone differ from that for both bones?

Is there any modification necessary for what is termed "silver fork" fracture?

If so, what and why?

What caution about tight dressings around the wrist?

State the general prognosis in fractures of the fore-arm?

State the rules for passive motion to be observed in fractures near or involving the shoulder, elbow, and wrist joint.

State the leading points in connection with fractures of the carpal, metacarpal, and phalangeal bones, as regards causation, diagnosis, and treatment.

FRACTURES OF THE FEMUR.

State the causes which may produce fractures of the shaft of the Femur.

What are the signs indicating this injury?

How are the symptoms modified when the fracture is near the trochanters?

-
- Is this fracture usually oblique or transverse ?
- Is the deformity much or little comparatively ? Why ?
- What is the average prognosis as regards shortening under proper treatment ?
- How much shortening may a patient sustain without limping ?
- Why is this ?
- State the general plan of treatment for these fractures, and the most important specific methods employed, comparing them, in value, with one another.*
- Does the treatment differ for fractures near the middle portion of the bone and those near the trochanters ?
- If so, how ?
- What are the predisposing causes to intra-capsular fractures of the *cervix femoris* ?
- What are the exciting causes ?
- Why are old people more subject to these injuries ?
- Why are females more prone to them than men ?
- How are intra-capsular fractures diagnosed ?
- What is the prognosis in these cases ?
- Do intra-capsular fractures ever unite by bone ?
- What difficulty in determining this point ?
- State the insertion of the capsular ligament.
- How does disease of the articulation change this insertion ?
-

* The student should be held to a rigid examination in this matter, as to character of the bed, position of the patient, importance and means of making extension, the kind of perineal band, the value of internal long splints, and of short splints, bandaging of the limb, etc.

How is a diagnosis to be made between an intra- and an extra-capsular fracture?

How does the prognosis differ for the two forms?

Describe the symptoms of fracture of the femoral condyles, single, supra-condyloid, and inter-condyloid, comparing them with the corresponding fractures of the humerus.

State the modifications of the treatment for fractures of the shaft of the bone, which are necessary for fractures of the intra-capsular, extra-capsular, and condyloid portions, with the reasons for the same.

What time is usually required for union?

How soon may the patient walk upon the limb?

How are fractures of the great trochanter produced?

What are the symptoms?

What is the treatment?

PATELLA.

What causes fracture of the patella?

What are the different forms of fracture here met with?

Which is the most common?

State the diagnostic symptoms and their rationale.

How do these fractures unite, by bony or ligamentous tissue?

What degree of separation between the fragments is compatible with freedom from lameness?

What is the treatment for these fractures?

BONES OF THE LEG.

What causes produce these fractures?

- At what point are those of both bones most frequent?
- What is the frequency of compound fractures in this locality as compared with the thigh? Why?
- What is the rule with reference to the obliquity of these fractures?
- State the comparative frequency of fractures of the tibia, alone, at different points.
- Of the fibula, alone, at different points.
- Give the diagnosis of fractures of the tibia and fibula, either single or combined.
- State the best methods of treatment for the several forms of injury?
- Compare, particularly, the management of fractures of a single bone with those where both are involved.
- How long time is required for consolidation?
- What is the prognosis, as compared with similar injuries of the thigh bone, with reference to non-union? To deformity?
- What causes produce fractures of the tarsal and metatarsal bones?
- Are they common or not?
- How diagnosed?
- What determines the kind and extent of deformity?
- What is the treatment?

VERTEBRÆ, RIBS, STERNUM, AND PELVIC BONES.

- How are fractures of the vertebral bodies produced?
- What portions of the spinal column are most frequently thus affected?

What are the characteristic symptoms ?

Explain them.

What is the prognosis in these accidents as regards life, deformity and permanent impairment of nervous function ?

What is the appropriate treatment ?

What causes produce fracture of the vertebral laminae and processes ?

How are these fractures diagnosed ?

What is the prognosis ?

State the ordinary treatment.

Is trephining or any operation to relieve displacement of fragments ever proper ?

If so, under what circumstances ?

State the important points in connection with fractures of the pelvic bones, pertaining to their causation, symptomatology, prognosis, and treatment.

What causes may produce fracture of the ribs ?

What are the diagnostic symptoms ?

Are these fractures frequent or rare ?

What is the most frequent locality ?

What causes often render the diagnosis of these injuries difficult ?

What serious complications often obtain ?

Is there anything peculiar about the provisional callus in these fractures ?

How is this explained ?

What is the prognosis, as regards deformity ?

In treatment of fractures of the ribs, what are the indications to be fulfilled?

What are the best means of meeting these indications?

How do separations of the costal-cartilages compare in frequency, etiology, prognosis, and treatment, with the fractures just described?

Make the same comparison for fractures of the sternum.

In any of these accidents, is it ever proper to expose the fragments for the purpose of restoring them to their proper position?

If so, when?

COMPOUND FRACTURES.

What are the general modifications of the treatment described for simple fractures, when the injury is compound?

Why is it desirable to close the external wound by first intention if possible?

What is the comparative prognosis in these cases?

Why the difference?

DISLOCATIONS.

What is Dislocation of Bone?

Is the term luxation synonymous or not?

What are the predisposing causes?

What the exciting causes?

How do spontaneous luxations occur?

What is a simple dislocation? Compound? Complicated? Partial? Complete? Primary? Secondary? Traumatic? Pathological?

What are the general signs of a luxation?

Under what conditions may one or more of these signs be absent?

Compare these with those of fracture?

How do the symptoms of a complete luxation differ from those of a partial one?

What causes determine the deformity in any case of dislocation?

In the answer to this question, compare the influence of muscular action with that of untorn ligament, and state the comparative importance of these two causes, both as determining the deformity and as opposing forces to reduction.*

What, then, are generally the opposing forces to be overcome in reducing dislocations?

Which one is the most constant and formidable?

What extraordinary conditions may sometimes hinder the replacement of the bone?

State the general rule to be observed in the reduction of all luxations.

In what direction will the limb be most easily moved?
Why?

What is the value of anæsthetics in aiding reduction?

Does or not complete anæsthesia abolish muscular resistance?

Has it any influence upon the untorn portion of the capsular ligament?

How does complete laceration of the capsule modify the symptoms?

* It is hoped that the teacher will hold the student to the most critical and thorough investigation of this all-important subject.

How the ease and method of reduction?

What are the signs of complete reduction?

How is the false crepitus, sometimes existing in these cases, distinguished from the crepitus of fracture?

What causes produce it?

What are the subcutaneous landmarks which guide the surgeon in making a diagnosis?

State those for the several joints of the body.

LUXATIONS OF INFERIOR MAXILLA.

State the predisposing and the exciting causes of dislocations of lower jaw.

Are they frequent or rare, comparatively?

Usually single or double?

Complete or partial?

What anatomical peculiarities of the articulation of interest in this connection?

Is the capsule usually torn in these fractures or not?

What are the diagnostic symptoms of a single complete luxation? Double? Of a partial displacement?

How diagnosed from tetanus?

State the method of reduction.

What is the after treatment?

CLAVICLE.

Are luxations of the clavicle most common at the sternal or acromial end?

Compare dislocations of this bone with fracture of the same in etiology, symptoms, and treatment?

HUMERUS.

Explain the comparative frequency of dislocations of the shoulder-joint.

How are they produced ?

In what several positions may the head of the humerus be thrown ?

Which is the most common form of luxation ?

Which the rarest ? Why ?

State the characteristic deformity for each variety, and explain it for each.

How is a differential diagnosis made between luxation of the shoulder and fracture of the acromia ? Of the surgical neck of the scapula ? Of the surgical neck of the humerus ? Of the anatomical neck ?

Is it possible for complete luxation of the *caput humeri* to occur without laceration of the capsule ?

State the method of reduction for each form of scapulo-humeral dislocation, and the philosophy of the treatment.

LUXATIONS OF THE ELBOW-JOINT.

What are the most common forms of displacement of the bones of the fore-arm upon the humerus ?

What causes produce them ?

What is the position of the bones in a backward and outward luxation ?

In a backward and inward luxation ?

What are the symptoms of each variety ?

How diagnosed from the condyloid fractures ?

How is the peculiar deformity explained ?

What circumstances may modify the ordinary symptoms, and to what degree?

In backward dislocations is the coronoid process of the ulna broken or not?

What causes produce forward luxation of the radius and ulna?

Is a complete luxation of this kind possible?

How diagnosed?

How are lateral displacements produced?

Rare or not?

Partial or complete?

What are the diagnostic signs?

State the method of reducing the several forms of dislocated elbow and the rationale of each procedure.

In what position should the arm be dressed, straight or flexed? Why?

Is the ulna ever dislocated alone?

If so, describe the symptoms and treatment.

In what directions may the head of the radius, alone, be displaced?

What are the causes of this injury?

What are the symptoms of each form of dislocation?

What is the treatment?

DISLOCATIONS OF THE WRIST AND FINGERS.

Is luxation of the wrist-joint comparatively rare or not? Why?

What accident is often confounded with it?

What are the symptoms?

State the differential diagnosis between a carpo-radial luxation and Barton's fracture.

Are these dislocations comparatively difficult or easy of reduction? Why?

What is the proper method?

Are displacements of the carpal bones upon one another, or upon the metacarpal, frequent or rare? Why?

How diagnosticated?

How reduced?

State the etiology and diagnosis of metacarpo-phalangeal and phalangeal luxations.

State the general rule for their relief.

Why in certain cases are these luxations so difficult of reduction by the ordinary methods?

What treatment has been recommended by Prof. Crosby in such cases?

Explain the *modus operandi* of his procedure.

Is the unusual degree of resistance in these exceptional cases fairly attributable to muscular resistance?

Is tenotomy ever required or justifiable in these cases?

If so, is tendon or ligament to be divided?

LUXATIONS OF THE HIP-JOINT.

Compare the anatomy of the hip and shoulder joints as predisposing to luxation.

Describe carefully the structure and insertion of the capsular ligament of the coxo-femoral articulation.

What are the principle varieties of dislocation of this articulation ?

State the causes which produce them, describing accurately for each form the position which the limb must assume with reference to the body before the head of the bone escapes from its socket.

Describe the symptoms of a luxation of the head of the femur upon the dorsum ilii.

How do the symptoms vary when the head of the bone rests upon or in the ischiatic notch ?

What is the differential diagnosis between a dislocation upward and backward and an intra-capsular fracture ?

What are the symptoms of a luxation downwards upon the thyroid foramen ?

What of a luxation forward upon the pubis ?

Recapitulate the symptoms of the four luxations named, and compare critically with one another.

What modifications of these principal forms of dislocation may occur ?

Under what circumstances ?

State the causes which determine the peculiar deformity in either form of luxation, *comparing the influence of muscles with untorn ligament.*

How can the influence of the untorn portion of the capsule be demonstrated ?

Does the particular portion which remains uninjured necessarily differ in the several varieties ?

What peculiarities about the anterior portion of the capsule ?

Is it possible or not to produce the several displacements already described, without laceration of the "Y shaped portion"?

How does complete laceration of the capsule modify the symptoms?

What is the main opposing force to reduction?*

How can this be proven?

As a rule, through what route will the head of the bone most readily return to its socket?

In what direction will the limb move easiest?

Repeat the general rule for the reduction of all luxations.

State the manipulations necessary for the reduction of each form of dislocation of the hip, and give the reasons therefor.

What amount of force is ordinarily requisite?

Describe what is known as Reid's method.

What is the philosophy of it?

What is the after treatment in cases of hip luxations?

LUXATIONS OF PATELLA AND KNEE JOINT.

What causes dislocate the patella?

State the several varieties of this accident.

Describe the symptoms of each.

What is the method of reduction?

Is this usually easy of accomplishment or not?

In what position of the bone is replacement most difficult?

* It is desirable that the student should here be held to a rigid examination of the question of muscular and ligamentous resistance as applying to this particular articulation, if possible experimenting upon the cadaver stripped of muscles.

What is the after treatment?

Are dislocations of the knee joint usually partial or complete? Why?

Describe a partial luxation of this joint.

What causes produce it?

How reduced?

How is a complete dislocation diagnosed?

What is the mode of reduction?

Explain the fact that complete luxations of this, the largest articulation in the body, are comparatively easy of reduction and its bearing upon the question of muscular and ligamentous resistance.

What is the after treatment?

What the prognosis?

LUXATIONS OF THE FOOT AND ANKLE.

Are tibio-tarsal luxations generally complete or partial?

In what directions may the astragalus be displaced?

What is a frequent complication of the lateral varieties?

State the diagnostic symptoms of the several luxations of the astragalus; of the other tarsal bones; of the metatarsal and phalangeal, comparing them with those of dislocation of the corresponding bones of the hand.

Describe the management of these luxations.

LUXATIONS OF THE VERTEBRÆ.

What causes produce vertebral luxations?

At what points in the vertebral column are these most frequent?

Are they complete or partial?

What are the local diagnostic signs?

What the constitutional symptoms?

What are the rules of procedure in treatment?

What is the prognosis?

State the difference in symptoms, prognosis, and treatment of diastases of the pelvic bones as compared with fractures of the same.

State the general rules for the management of Compound dislocations.

What is the greatest danger?

Under what circumstances is excision proper, and why?

What is the prognosis in these cases?

Under what cases is amputation justifiable?

State the difficulties to be overcome in the reduction of old dislocations, describing the pathological changes that occur in and around the articulating surfaces.

What are the dangers encountered in these operations?

State for the shoulder, elbow, and hip joints the average limit of time when it is advisable to attempt reduction.

What is the general plan of procedure?

State the rules for making passive motion after the reduction of a luxation, whether recent or old, describing the circumstances under which it should and should not be employed.

SPRAINS.

What are the predisposing causes to sprains of joints?

What the exciting causes?

What are the symptoms?

Whence the severe pain?

Whence the swelling?

What is the great danger?

What is the treatment?

In this connection state the value of absolute rest, the length of time during which it is essential, and the best means of attaining it.

In neglected cases, when the joint is weak, tender, and swollen, what is the appropriate management?

WOUNDS OF JOINTS.

What are the chief dangers to be apprehended from wounds of joints?

What kinds of wounds are most to be dreaded?
Why?

What harm does air produce when allowed entrance into the cavity of a joint?

What are the indications to be fulfilled in the treatment of these wounds?

If inflammation arises, does it require any special treatment as compared with other forms of acute arthritis?

What are the symptoms of acute arthritis?

State the different varieties of this affection.

Upon what does the degree and type of constitutional disturbance depend?

Describe a case of pure acute synovitis. Of chronic synovitis.

What are the causes of either form?

Is suppurative arthritis common or rare?

What is the prognosis?

What is the general management of acute arthritis?

What is the value of rest?

In what class of cases is extension useful? Why?

How made?

When is it injurious?

When should passive motion be employed?

What course is to be pursued when suppuration occurs within the cavity of the joint?

State the argument for and against free incisions.

How does the general plan of treatment vary in the sub-acute and chronic forms of inflammation?

What is meant by tuberculosis of joints?

Are these cases usually genuine tuberculosis or not?

What is the probability, in the majority of cases, of traumatic origin?

What causes render the early history of these cases obscure?

What is meant by Coxalgia?

What other terms are used synonymously?

At what age is it most common? In what sex? In what class of patients?

What are the ordinary causes?

Into how many stages is it divided?

Describe the symptoms of the first stage. How are these explained?

What is the condition of the articulation during this change?

What change in the joint follows unless the disease is arrested?

What are the characteristic signs of the second stage? How explained?

Is the lengthening apparent or real?

What is the proof and the explanation?

Describe, in a typical case, the subsequent changes that take place in and around the joint, and the symptoms characteristic of the third stage.

Give the rationale of the several symptoms.

Is the ankylosis fibrous or bony?

During the progress of local disease, what is the constitutional condition?

What is the prognosis in this disease left to itself?

What if promptly and properly treated?

What is the main indication in the early treatment, *i. e.* in its first stage?

State particularly the various methods of making extension.

How can it be maintained at night with comfort to the patient?

How during the day and yet allow exercise of the limb?

In what cases is extension inadmissible?

What, then, can be done to prevent friction of the inflamed surfaces?

In the second stage, what is the treatment?

Is extension useful then?

Is it ever proper to puncture the capsule?

What is the plan of treatment for the third stage?

Is extension useful in this stage?

If so, for what purpose and to what degree?

How are abscesses to be managed?

Under what circumstances is excision advisable?

When is tenotomy useful and why?

State the general plan of constitutional treatment?

State how far the same principles of treatment, especially the use of extension, are applicable to other joints.

How can efficient extension be made for the knee joint? Ankle? Elbow? Wrist?

Describe the rise and progress of the chronic affection of the knee joint commonly known as "white swelling," "scrofulous knee," "Brodie's scrofulous knee joint," stating the successive pathological changes.

In a given case, in any joint, what signs indicate that one of the following structures is more involved than the others: synovial membrane; cartilages; bones; periosteum; ligaments?

What causes the frequent displacement of the tibia in these cases?

How is the spasmodic action and the subsequent contracting of muscles around a diseased joint explained?

In the treatment of these cases, state the value and conditions for employing rest; extension; local depletion; blisters; iodine; hot or cold showering or packing; pressure; free incisions.

What is the prognosis?

Is ankylosis to be expected?

Is it to be sought for or not?

When is excision proper?

When is amputation preferable?*

Answer the two last questions for the several articulations of the body.

What is meant by Dropsy of a Joint?

What are the causes?

What the diagnostic symptoms?

What relation does this affection hold to synovitis?

What is the pathological anatomy?

What the prognosis?

State the proper treatment.

What varieties of movable bodies occur, pathologically, within articulations?

Is the term "inter-articular cartilages" proper, as applied to them?

What causes produce them?

To what symptoms do they give rise?

What is the appropriate treatment?

What the prognosis?

* The teacher will apply the same class of questions both as regards pathology, diagnosis, and treatment to other articulations, as minutely as he thinks proper.

What are the different forms of Anchylosis?

What are the causes?

When is anchylosis desirable?

When inevitable, what is the best position for an anchylosed shoulder? Elbow? Wrist? Finger? Hip? Knee? Ankle?

Under what circumstances does anchylosis require treatment?

State the best methods of treatment for the two forms, describing the more important operations practiced and the best kinds of apparatus.

What symptoms obtain in the so-called "Hysterical" affections of Joints?

What is the treatment for these cases?

INJURIES OF THE HEAD.

What is meant by concussion of the Brain?

What are the several degrees?

How produced?

Is it proper or not to apply this term to sudden powerful impressions produced by mental or moral causes?

Detail the symptoms of a pure case of concussion of the brain.

How do these compare with those of collapse in general?

What secondary pathological results are liable to follow?

Why should the prognosis be especially guarded in these cases?

What is the immediate treatment in such accidents?
What the after management?

Define Compression of the Brain.

What are the several causes that may produce it?

Is compression of the brain always accompanied by symptoms?

What parts of the encephalon are most tolerant of compression or laceration?

How is this difference explained?

What is the liability to the development of remote pathological changes in cases of continued compression, where immediate symptoms are wanting?

State, step by step, the differential diagnosis between concussion and compression of the brain.

What are the signs of intra-cranial inflammation?

What of intra-cranial suppuration?

SCALP.

What peculiarities pertain to certain tumors of the scalp produced by blows or pressure?

How explained?

How can one of these be diagnosed from a simple, depressed fracture of the skull?

Do wounds of the scalp require any special modification of the treatment recommended for wounds of soft parts in general?

Is there any foundation for the opinion that scalp wounds are specially liable to erysipelatous inflammation?

SKULL.

Under what circumstances do simple indentions of the cranial bones occur?

What is the prognosis without treatment?

State the several causes which may produce fracture of the skull?

What is meant by fracture by *contrecoup*?

What portion of the skull is most likely to be fractured in this way?

Is this form of fracture ever depressed?

Is it possible to diagnose a simple fissure of the skull without displacement?

How are simple depressed fractures diagnosed?

With what may these injuries be confounded?

In these cases, unattended with symptoms of compression, is operative interference proper or not?

State the circumstances which are to determine the course to be pursued in a given case.

What are the objections to exposing the dura mater?

How are the indications changed when the fracture is compound? Why?

In either case, what are the suitable instruments for raising the depressed bone?

Describe the different forms of trephine and the mode of using it.

What is its use and mode of application in the treatment of depression?

How does this differ from its use in opening the skull for the relief of abscess or extravasation?

What are the advantages of the conical over the cylindrical forms of trephine?

What course is to be pursued when fragments of bone penetrate the brain, or when the brain substance extrudes?

When portions of the cranium are entirely detached?

When comminuted but adhering to dura mater or pericranium?

What is the prognosis in cases where the cerebral substance is extensively lacerated or even a considerable portion lost?

In simple depressed fractures, requiring operation, how should the incisions be made?

How should the wound be subsequently dressed?

How should the compound fractures be dressed?

Is any modification of dressing necessary when a considerable surface of bone is lost?

What supplies the place of the lost bone?

Why are punctured fractures of the skull especially dangerous?

What is the rule of procedure in the treatment of these cases? Why?

Why are fractures of the base of the skull comparatively rare?

Why so much more serious than those of the superior or frontal portions?

Why so little comparative displacement?

What causes produce them?

What are the diagnostic symptoms?

Is there any pathognomic symptom?

What other causes may produce hemorrhage from the ear ?

Is there any other cause that may produce serous discharge from the auditory canal ?

What is the prognosis in these cases ?

What the treatment ?

What is meant by "Hernia Cerebri" ?

Is it a true hernia ?

What is the prognosis ?

What the treatment ?

State in general terms the after treatment for all cranial fractures.

Under what circumstances is it advisable to operate for old depressions of the skull ?

What is the prognosis in these cases ?

Answer the same questions for cases of foreign bodies lodged in or beneath the skull, morbid growths on its under surface, and old extravasations or effusions.

INJURIES OF THE SPINAL CORD.

What causes produce concussion of the Spinal Cord ?

Is it ever produced by counter-stroke ?

If so, how ?

What are the symptoms ?

What secondary affections are likely to supervene ?

What is the prognosis ?

What is the treatment ?

Compare, with reference to etiology, symptomatology, prognosis and treatment, a case of concussion of

the spinal cord with one of concussion of the brain.

Make the same comparison of wounds, and compression of the cord, with corresponding conditions of the brain.*

SURGERY OF THE EYE AND ITS APPENDAGES.

EXAMINATION OF THE EYE.

Describe the proper mode of everting the eyelids for examination, either for disease, wounds, or for the detection of foreign bodies.

What is the value of lateral illumination?

How to be practised?

What is an ophthalmoscope?

Describe the several forms, and the mode of using each.

What is the scope of ophthalmoscopic investigation?

Define ophthalmia; ophthalmitis.

To what conditions should these terms be restricted?

CONJUNCTIVA.

Define Conjunctivitis.

State the different varieties.

What are the causes of simple acute conjunctivitis.

What the diagnostic symptoms?

What the treatment?

Describe chronic conjunctivitis.

*It is desirable, in this connection, that the student of surgery should study the various affections of the spinal marrow and its meninges, which belong more particularly to the purely medical practitioner, such as meningitis, myelitis, atrophy, softening, etc.

What is the treatment?

Under what circumstances does the acute pass into the chronic form?

What are granular lids?

What relationship does this condition hold with reference to diseases of the cornea?

What is the appropriate management?

In the conventional sense of the term, what is catarrhal ophthalmia?

How diagnosticated?

How, if at all, does the treatment differ from that already described?

What is meant by purulent ophthalmia? Gonorrhœal ophthalmia?

Are the terms synonymous?

What is ophthalmia neonatorum?

What are the diagnostic symptoms in either form?

What the danger?

What the prognosis?

State particularly the rate of progress of these affections, and the indications for early treatment.

What is the proper method of treatment?

What are Phlyctænulæ?

What is phlyctenular ophthalmia?

How to be treated?

What is exanthematous ophthalmia?

What the treatment, as compared with other forms?

Define Xerophthalmia.

What are the causes?

What treatment has any value?

Define Pterygium.

What are the causes?

What is the danger?

Describe the different operations for its cure, and the comparative value of each.

What is Symblepharon?

What operative procedures are to be practised for its cure?

Define Anchyloblepharon.

What is the treatment?

What morbid growths are met with in the conjunctiva?

How are foreign bodies to be removed?

CORNEA.

Define Corneitis.

How diagnosed?

What secondary results follow uncontrolled inflammation of this organ?

What is meant by fascicular corneitis? Phlyctenular corneitis? Diffuse corneitis?

What different forms of corneal opacity are met with?

What is pannus?

How are ulcers of the cornea diagnosticated?

What difficulty often obtains in the diagnosis?

Give the plan of treatment, and the prognosis for superficial opacities

For interstitial opacities.

For corneal ulcers ; for suppurative corneitis.

What is meant by conical cornea ?

What by kereto-globus ?

Describe corneal staphyloma.

Is the iris usually involved, or not ?

What is the treatment for corneal, or irido-corneal staphyloma, and what is the object of it ?

Describe the treatment of the different kinds of wounds of the cornea.

What is the danger, and the prognosis ?

How are foreign bodies to be removed from the cornea ?

What is arcus senilis ?

IRIS.

To what functional disturbances is the Iris subject ?

What causes produce tremulousness of the iris ?

What are the symptoms of acute iritis ?

What are the causes ?

How do the symptoms and causes vary for the chronic form ?

What are the dangers ?

What is the treatment for acute iritis ?

In this connection, compare especially the value of local and constitutional remedies, and the effect of depletion, local or general, counter irritation, mercury, iodide of potassium, *atropine*, quinine, and iridectomy.

How does the treatment differ from chronic iritis ?

What is synechia ?

What forms are met with ?

What harm results from synechia ?

What is the treatment ?

What congenital anomalies are met with in the iris ?

Define irido-choroiditis.

How diagnosticated ?

What is its relation to posterior staphyloma ?

How does the treatment differ from that for simple iritis ?

What is sympathetic ophthalmia ?

Is it frequent, or not ?

What conditions are most likely to produce it ?

What is the prognosis, as compared with the primary disease ?

State the value of, and the indications for enucleation in these cases.

Describe the operation of iridectomy.

What are the necessary instruments ?

For what purposes is the operation performed ?

What portion of the iris should be selected by preference ? Why ?

What is iridodesis ?

When and why to be preferred to iridectomy ?

What is corelysis ? Iridodyalasis ?

What is the value of these several procedures ?

SCLEROTIC AND CILIARY BODY.

How is Scleratitis diagnosed ?

How diagnosed from ciliitis ?

What is episcleritis ?

How are these affections treated ?

What is sclerotic staphyloma ?

How does the treatment compare with that of staphylomatous cornea ?

What is the proper management of wounds of the sclerotic ?

CRYSTALLINE LENS.

What is Cataract ?

Describe the several forms: lenticular; capsular; cortical; nuclear; lamellar; traumatic; soft; hard; diabetic.

Which form is congenital ?

What is the usual form of senile cataract ?

At what age does it usually appear ?

Is it usually single, or double ?

When double, are both eyes usually affected contemporaneously ?

What are the ordinary symptoms of cataract ?

What the means of diagnosis ?

Under what conditions do the symptoms vary ?

What is the value of medicinal treatment ?

Describe the following operations for the cure of cataract, stating their comparative value, and the class of cases to which each is applicable, if at all. Sperino's method of paracentesis; the needle operation; reclination; couching; flap extraction; linear extraction; modified linear extraction; scoop extraction; extraction by suction; extraction of the lens in its capsule.

What are the operations for removal of capsular cataract ?

Do the operations for traumatic cataract differ from those described?

What is the after treatment?

What is the prognosis as regards vision?

How does contemporaneous iridectomy affect this prognosis?

What lenses will the patient require?

What is Aphakia?

What is meant by ectopia lentis?

How diagnosed?

How are these cases to be managed?

VITREOUS HUMOR.

To what affections is the Vitreous body subject?

How are these diseases diagnosed?

Is there any special treatment for them?

How are foreign bodies in this part of the globe to be dealt with?

RETINA.

What causes produce Retinitis? *

What are the symptoms of the acute form?

Of the chronic form?

What is the general plan of treatment of retinal inflammations?

* Let the student here, as in all the diseases of the eye, study the various constitutional diseases that play so important a part in the etiology of the several grades of Retinitis, as albuminuria, syphilis, etc.

OPTIC NERVE.

How is inflammation of this nerve diagnosed?

What are the exciting causes?

What is the treatment?

What causes produce atrophy of the optic nerve?

How is it diagnosed?

What symptoms arise from excavation of the nerve?

How is this condition ascertained?

How treated?

What morbid growths are found here?

What is Amaurosis? Amblyopia? Hemeralopia?

Are these terms applied to actual diseases, or to symptoms of disease?

What is "color blindness?"

Is it amenable to treatment?

If so, what?

CHOROID.

State the morbid conditions met with in the Choroid coat.

How diagnosed from affections of the iris, sclerotic, and retina?

Do the affections of this membrane require any particular modification of that recommended for the iris?

If so, what?

GLAUCOMA.

Define Glaucoma.

What are the causes?

Describe the rise and progress of a typical case of acute glaucoma, to its termination, unmodified by treatment.

How does the history of a chronic case differ?

For what other affections is it likely to be mistaken?

What is the differential diagnosis, and the means of making it?

What is the treatment of glaucoma?

State particularly the value of iridectomy in these cases.

What is the comparative danger of sympathetic disease of the other eye?

REFRACTION AND ACCOMMODATION.

What is Emmetropia?

Describe the mechanism of normal refraction and accommodation of the eye.*

What is Myopia?

What are the immediate causes?

What are the exciting causes?

What fault is likely to exist in the posterior part of the globe in these cases?

What is the great danger in myopia, as regards the future welfare of the eye?

Is myopia usually congenital or acquired?

How is myopia diagnosed?

What is the treatment, aside from the adjustment of lenses?

* The most accurate anatomical and physiological knowledge, and also an acquaintance with the science of optics, must precede the profitable study of this subject.

What special caution should the patient exercise ?

What lenses are appropriate ?

What especial care is to be used in selecting the proper power ?

Is the popular notion that mopic eyes are strong ones, correct ?

Define Presbyopia.

What are the causes ?

At what period of life is it most common ?

What is the diagnosis ?

How is the degree of this determined ?

Answer the same question for myopia and hypermetropia.

What lenses are required for the correction of vision ?

What is Hypermetropia ?

Is it common, or not ?

What are the causes ?

Is it common among young people ?

For what is it *very frequently* mistaken ?

What is the diagnosis of this disease ?

What lenses are required to correct it ?

What is Astigmatism ?

With what affections is it liable to be confounded ?

What are the causes ?

Is it usually congenital, or acquired ?

At what period of life does it occur, when acquired ?

Why does the defect in the corneal meridians often exist unnoticed in early life ?

What are the means of accurate diagnosis?

Can an artist, who is astigmatic, paint a correct picture?

What lenses are necessary to correct astigmatism?

What other causes than those already considered may impair the refractive and accommodative functions?

MUSCLES OF THE EYE.

What is Nystagmus?

What are the causes?

What is the treatment?

What are the symptoms of "Muscular Insufficiency?"

What causes produce this condition?

What is the treatment?

Can the prismatic quality of lenses be combined with other elements, such as convexity, concavity, etc., in complicated cases?

What is Strabismus?

State the several forms?

Is it usually congenital, or acquired?

What are the exciting causes?

Is it usually single or double?

How is the degree determined?

What is the effect upon vision?

What treatment is efficient, short of operative procedure?

What is the prognosis, after proper division of the offending muscles?

What danger from myotomy?

What are the proper conditions for the operation?

What are the proper instruments therefor?

Describe the best method of operation.

Should both eyes (when affected) be operated upon simultaneously?

What is the proper after treatment?

When but one eye is operated on, should it or the well one be bandaged? Why?

LACHRYMAL APPARATUS.

What are the symptoms of inflammation of the Lachrymal gland?

What is the treatment?

What is stillicidium lachrymarum?

What are the causes?

What is the best treatment for stricture of the punctæ or the canaliculi?

Describe the instruments for dilating, or for slitting them.

How is inflammation and distension of the lachrymal sac diagnosed?

What are the usual causes of these affections?

State the general plan of treatment.

How is this modified, when the nasal duct is involved?

What is the treatment of fistula lachrymalis?

ORBIT.

What is Exophthalmia?

With what other affections is it usually complicated?

What is the explanation of this protrusion?

What the treatment?

What morbid growths are likely to occur in the orbit?

How does the old operation of Extirpation of the eye differ from the modern one of Enucleation?

Under what circumstances is the former warrantable?

The latter?

Describe the operation of enucleation.

When is abscission of the eye to be performed?

How?

How are artificial eyes inserted? How removed?

What instructions should the patient receive in managing them?

Is it better that they be inserted early or late after the operation? Why?

EYELIDS.

What Tumors are common on the lids?

Are they usually external or internal to the cartilage?

What caution is to be observed in their removal?

What is hordeolum?

What is the treatment?

What is ptosis?

What are the causes?

What the treatment?

What symptoms indicate paralysis of the orbicularis muscle?

What are the causes?

What the treatment?

Describe the symptoms, causes, and treatment of ophthalmia tarsi?

What is trichiasis? Distichiasis?

What causes induce these affections?

How are they to be managed?

Define entropium; ectropium.

How do these deformities occur?

Describe the various operations for their relief.

SURGERY OF THE EAR.

What are the several methods of, and instruments for, examination of the Ear.

EXTERNAL EAR.

What deformities are met with in the External Ear?

What operations are practiced for their relief?

What morbid growths are frequent in the lobule?

How is this frequency explained?

What relations do arrests of development of the auricle bear to the general organization?

AUDITORY CANAL.

What forms of inflammation are here met with?

How are auditory inflammations diagnosed?

Describe the rise and course of a furuncle, or an abscess, in the walls of the canal.

What different pathological conditions receive the popular name of "sores" or "ulcers in the head."

What is the treatment for these cases?

What is otorrhœa ?

Describe the different forms of otorrhœa.

What are the causes ?

What the general treatment ?

State the different forms and causes of otitis.

What is the treatment for the several varieties ?

What diatheses are most prone to aural affections ?

What are the secondary results of otitis ?

What is the use of the cerumen ?

What causes impaction of wax ?

What are the symptoms ?

How is it diagnosed ?

What is the treatment in these cases ?

What cautions about syringing the ear ?

Describe the proper instrument and the procedure.

Describe the management of Foreign Bodies in the Ear.

State, particularly, the difference between the treatment for an inorganic and a live body.

In other terms, state how you would remove a bean from the auditory canal.

How would you remove a spider ?

Why the difference in the method employed for the two cases ?

MEMBRANA TYMPANI.

What is the office of this organ ?

What diseases is it prone to ?

How diagnosed ?

What is the treatment for inflammation of the eardrum ?

How are perforations or lacerations diagnosed?
Why the great difference in the intensity of symptoms in different cases?

What is the value of artificial membrana?

How constructed?

How applied?

What affections of the internal ear are common complications of myringitis and of destruction to the ear-drum?

What is the office of the eustachian tube?

What affections of it cause deafness?

How diagnosed?

What is the treatment of eustachian obstruction?

In this connection, describe the instruments for, and the value of catheterism and inflation.

What morbid growths are met with in the ear?

What is the method of removing aural polypi?

What is nervous deafness?

What are the causes?

What is the treatment of the several forms?

What are the causes of deaf-mutism?

What are the several forms of ear-trumpets? Of auricles?

When is their use indicated?

What is the test of degrees of deafness?

What is *tinnitus aurium*?

How is it that many patients, suffering from nervous deafness, hear better in the midst of a loud noise?

SURGERY OF THE FACE, THROAT, AND NECK.

What is Epistaxis?

What are the producing causes?

What subjects are most prone to it?

What are the more simple remedies?

What the most efficient?

Describe the instruments for, and the operation of,
plugging the nares.

What morbid growths are met with in the nares?

Describe the method of removal.

Describe the operation for restoring a partial or complete loss of the nose?

What are the symptoms of abscess of the nostrum?

What is the treatment of this affection?

What morbid growths are found in the cavity?

How removed?

What circumstances require Excision of the Upper
Jaw?

Describe the operation?

What is the prognosis?

Under what circumstances may it be displaced and replaced?

Describe excision of the lower jaw, both partial and complete?

What affections require this operation?

What is epulis?

How diagnosed?

How to be treated?

What is the prognosis?

What is hare-lip?

What are the causes?

What several forms?

What relationship to cleft palate?

What other corresponding defects of development occur in the body?

What is the best method of operating for hare-lip?

At what age should it be performed? Why?

What is the best operative treatment for cleft palate?

What is the prognosis after operative procedure?

At what age should the operation be made?

How are artificial palates made?

What is their value compared with operative closure?

What is ranula?

How treated?

Describe the operations for partial and complete excision of the tongue.

Under what circumstances is it advisable to excise the tonsils?

Describe the instruments for and the method of the operation.

When and how is the uvula to be excised?

What are the causes of œdema glottidis?

What are the symptoms?

What is the treatment?

How is stricture of the œsophagus diagnosed ?

What is the treatment ?

What is the general management of foreign bodies in the œsophagus ?

What are the proper instruments for their removal ?

How is œsophagotomy performed ?

When indicated ?

How is a differential diagnosis made between obstruction of the œsophagus and of the trachea or larynx ?

What is the treatment for the latter class of cases ?

When is laryngotomy proper ?

Describe the operation and after treatment.

Describe the laryngoscope and the mode of using it ?

Under what circumstances is tracheotomy required ?

State the several steps of the operation and the best instruments for its performance.

What is Bronchocele ?

Describe the different forms.

What sex is most liable to this disease ?

Where is it most frequent ?

What is the medical treatment ?

What the surgical treatment ?

When is extirpation advisable ?

What are the dangers ?

What is the best mode of operating ?

SURGERY OF THE CHEST.

What affections of the mammary glands require their removal?

Describe the operation for extirpation of the breast?

Under what circumstances should the entire gland be removed?

What class of growths should be enucleated, saving the gland if possible?

When axillary lymphatics are involved, how should they be dealt with?

State the general management of perforating wounds of the chest.

In case of hemorrhage, should the wound which perforates the pleura or lung, or both, be hermetically sealed or not? Why?

When is paracentesis thoracis indicated?

Describe the operation.

At what point should it be made by preference?

SURGERY OF THE ABDOMEN.

What are the diagnostic symptoms of Peritonitis?

Of enteritis?

How does the gravity of a peritoneal wound vary with its locality?

Why this difference?

What is the general treatment of these wounds?

When the abdominal viscera protrude, what is the treatment?

Which portion should be returned first?

In cleansing the parts, should cold or warm water be used?

In what manner should intestinal wounds be closed?
Why?

How is intestinal obstruction diagnosed?

What are the different varieties?

What is the treatment of each?

Under what circumstances is the formation of an artificial anus justifiable?

Describe the operation?

When is abdominal paracentesis called for?

How performed?

HERNIA.

Define hernia?

To what conditions is the term usually restricted?

What is meant by congenital hernia?

By acquired hernia?

What is the probability that in all cases of acquired hernia, some congenital defect exists?

When is hernia said to be Reducible? Irreducible?
Incarcerated? Strangulated? Concealed?

How do the contents of the sac vary?

What is inguinal hernia?

What varieties?

When is it difficult to diagnose the one from the other?

Give the anatomy of each.

What is scrotal hernia?

Give its anatomy.

What is femoral hernia?

Give its anatomy.

Define umbilical hernia.

Give its anatomy.

What are the rarer forms of hernia?

Which form is most frequently congenital? Why?

Which most frequent in the male (whether acquired or congenital)? Why?

In the female? Why?

What are the exciting causes of hernia?

What are the general diagnostic signs of a hernial protrusion?

With what other tumors is it liable to be confounded, and how to be distinguished from them?

What are the dangers from hernia?

What is the prognosis in congenital umbilical hernia, left to itself?

How does the prognosis differ from the other congenital varieties?

State the best treatment for congenital hernia during infantile life?

State the best methods of radical treatment of hernia in infants. In adults.

Compare the value and danger of the several plans for children and adults, in the inguinal, femoral, and umbilical varieties.

- What is the palliative treatment of hernia?
- Describe the most perfect form of truss for either variety.
- What is the best management for irreducible or incarcerated hernia?
- When is Hernia said to be strangulated?
- What are the predisposing, and what the exciting causes of this condition?
- What are the diagnostic symptoms, both objective and subjective, of strangulation?
- What circumstances are liable to deceive the surgeon in making a diagnosis?
- Explain the subjective symptoms.
- How can the occasional absence of objective symptoms be accounted for?
- How soon, on the average, do unrelieved strangulated hernias prove fatal?
- What is the mode of death?
- State the treatment of these cases, describing the *modus operandi* of and comparing the value of the following agents: taxis (how performed and the position of the patient); hot fomentations; ice; anæsthetics; hot bath; anodynes; venesection and nauseants; inversion of body; dividing the stricture.
- Are hernial protrusions more easily reduced when the patient is standing or recumbent? Why?
- What danger from prolonged taxis?
- From prolonged cold?

What is the comparative gravity of the "cutting" operation *per se*?

How does the danger differ in the several kinds of hernia?

Why this difference?

State the general plan of operation in dividing the stricture for each form of hernia, and why?

Shall the sac be opened or the stricture be divided outside of it? Why or why not?

In old hernias, or in recent ones much inflamed, how are the anatomical landmarks changed?

How is the surgeon to know when he has reached the sac?

How when he has opened it?

The stricture being divided, in what manner is the protrusion to be returned?

How is the question of gangrene to be determined?

If the parts are gangrenous, how are they to be dealt with? If omental? If intestinal?

State the method of dressing and the after treatment.

Does the operation for strangulated hernia result in a radical cure?

SURGERY OF THE RECTUM AND ANUS.

What congenital malformations of the rectum and anus are met with?

State the different forms and degrees of imperforate rectum.

When is an operation for the relief of occlusion indicated?

What is the proper method of operation ?

When imperforate anus is accompanied by absence of the rectum, what operation affords relief?

Compare the iliac, lumbar, and perineal incisions, with reference to the mode of operating, the class of cases demanding each, and the differential prognosis.

What forms of Stricture are met with in this locality?

What are the symptoms of stricture of the rectum?

What are the secondary affections following unrelieved stricture?

What is the treatment of simple stricture?

Compare, in value, dilatation, slow or rapid, division of the sphincter by the knife and by rupture.

How are malignant strictures to be managed?

What forms of malignant disease are most frequent here?

What forms of benign growths?

Are cancerous growths of the rectum comparatively slow or rapid in progress?

What is Fistula in Ano?

What causes produce it?

What peculiarities pertain to abscesses in the rectal region?

How does their treatment differ from that for abscesses in other localities?

What is a blind fistula?

How far within the anus does the fistula open?

How are these fistulae diagnosed?

What is the proper operation for their cure ?
How does the treatment differ for blind fistula ?
State the reasons for the same.
Why is simple medicinal treatment of so little avail ?
What is the after-treatment ? *

What causes produce Ulcers and Fissures of the Anus
and Rectum ?

How are these affections diagnosed ?
What are the main indications for treatment ?
How best fulfilled ?
What is Prolapsus Ani ?
What are the causes ?
What is the differential diagnosis between this affec-
tion and hemorrhoids ?
State the different methods of treatment.
When is the one to be preferred to any other ?

What are Hemorrhoids ?

What is the common name ?

What are internal hemorrhoids ? External ? Blind ?
Bleeding ?

What are the predisposing causes of piles ?

What the exciting causes ?

What the structure of the hemorrhoidal tumor ?

What other affections often complicate hemorrhoids ?

How are the several forms of piles diagnosed ?

State the palliative treatment for the several forms of
hemorrhoidal tumors.

* The questions for rectal fistula will be given in connection with sur-
gery of the female genito-urinary organs.

State the best methods of radical treatment.

State under what circumstances the ligature, clamp, knife, or scissors, and escharotics, or the actual cautery are to be used.

Should the sphincter be divided or not? Why?

If divided, should it be by the knife or by laceration? Why?

What danger pertains to the radical treatment of piles?

When and why is it well to establish an issue at some other point?

What is the general after-treatment?

What secondary evils follow unrelieved phymosis?

Describe the operation of circumcision.

How does the method differ for the child and the adult?

What other operations are practiced for the cure of this affection?

SURGERY OF THE MALE GENITO-URINARY ORGANS.

PENIS AND SCROTUM.

What congenital malformations of these organs are met with?

Define hypospadias. Epispadias.

What is the treatment of these affections?

What the prognosis?

What is Phymosis?

Is it oftener congenital or acquired?

What are the causes of acquired phimosis?

What is the value of circumcision as a prophylactic measure?

What causes produce simple spasm of the sphincter?

How is this affection diagnosed?

What is the treatment?

What is Paraphimosis?

What are the causes?

What the results?

What is the treatment?

What is Balanitis?

Describe the causes and treatment.

What is the treatment of hypertrophy of the prepuce?

What eruptive diseases are common about the penis?

What morbid growths?

How are foreign bodies in the urethra to be dealt with?

URETHRITIS.

Define Gonorrhœa.

Is this term synonymous with urethritis or not?

If not, state the difference.

Is it or not possible to diagnose a non-specific from a specific urethritis?

If so, state how.

May or not simple causes produce contagious or infectious forms of urethritis?

What are the several causes, both simple and specific, that produce urethritis?

Is mere nervous excitement sufficient to produce it?
What caution is especially necessary in dealing with these affections, with reference to the reputation of individuals and the welfare of families?

Into how many stages is gonorrhœa divided.

What are the symptoms of the first stage?

How soon developed after exposure?

How long does this stage last?

What are the signs of the second stage?

How long continued?

Describe the symptoms and time occupied by the third stage.

What is Chordee?

What two forms?

How diagnosticated from one another?

Give the general plan of treatment of gonorrhœa, stating the value of rest, cathartics, diuretics (what kind), fomentations, injections, etc.

Are mild or strong injections to be used as a rule?

What is meant by abortive treatment?

How practiced?

In what cases is it proper?

What danger from it?

What are the ordinary complications of gonorrhœa?

How is the gonorrhœal bubo diagnosed from the syphilitic?

How is its occurrence explained?

What is the treatment?

Is gonorrhœal orchitis a form of continuous or sympathetic inflammation?

What is gonorrhœal rheumatism ?

How explained ?

Is, or not, a patient suffering from any form of suppurative inflammation liable to arthritic inflammation ?

SEQUENCES OF GONORRHOEA.

What is Gleet ?

What are the pathological conditions that produce and perpetuate it ?

What is the general treatment ?

What is the treatment of granular urethritis ?

What are the several forms of stricture ?

What is the differential diagnosis between inflammatory, spasmodic, and organic urethral strictures ?

How is urethral stricture diagnosed from enlarged prostate ? From stone in the bladder ?

What sequences follow organic stricture ?

What is the treatment of Spasmodic Stricture ? Of the inflammatory form ? Of the organic form ?

What are the several methods of dilatation ?

Describe the different forms of bougies and compare their value.

Under what circumstances should the dilatation be gradual ?

How frequently and how long at a time should the operation be practiced ?

In what cases is rapid dilatation advisable ?

What is the method of, and what the instruments for the operation ?

- When is rupture of the stricture warrantable ?
- What are the best instruments for this procedure ?
- What are the dangers ?
- What conditions call for the use of the urethrotome ?
- What are the best instruments ?
- How does internal urethrotomy compare with forcible rupture of the stricture in value ?
- Whether the stricture be ruptured or cut, what is the after-treatment ?
- Under what circumstances is external section of the urethra called for ?
- What conditions require perineal section ?
- Describe the method of performing these two operations.
- Should the catheter be retained in the bladder or not, afterward ? (Argue this point *pro* and *con* carefully.)
- What other causes besides stricture cause retention of urine ?
- How is this condition diagnosed ?
- What is the difference between retention and suppression of urine ?
- State the general treatment of retention.
- What several conditions call for catheterism ?
- Describe the ordinary form of catheter.
- What are the different sizes ?
- How does the prostatic catheter differ from the ordinary form ? Why ?
- When is the metallic instrument to be preferred to the gum-elastic one ?

Describe, minutely, the operation of catheterism ?

What are the dangers ?

What are the common causes of failure ?

How are these to be obviated ?

What is the use of the double catheter ?

When is puncture of the bladder indicated ?

How performed ?

What are signs of hemorrhage into the bladder ?

What is the treatment ?

What causes produce extravasation of the urine ?

Describe the general management of this accident.

What are the causes of Acute Cystitis ?

What are the symptoms ?

What the treatment ?

What are the symptoms of chronic cystitis ?

What the ordinary causes ?

What the prognosis ?

What is the general treatment ?

Is ulceration of the bladder common or rare ?

How diagnosed ?

What is the prognosis ?

How does the treatment of this condition differ from
that of chronic inflammation ?

What is meant by sacculation of the bladder ?

What are the causes ?

How is this condition diagnosed ?

What is the treatment ?

What are the signs of enlarged Prostate ?

At what age does this disease occur ?

What is the pathological condition ?

State the diagnostic symptoms.

What is the prognosis ?

What is the general management of these cases ?

What causes produce Stone in Bladder ?

What are the several forms of calculi ?

How do the causes differ for the several varieties ?

How do the several varieties differ in structure and size ?

Under what circumstances are these calculi of renal and when of vesical origin ?

How does the location of calculi vary ?

What morbid changes in the bladder result from stone ?

Describe the symptoms of calculus, comparing these with the symptoms of stricture and enlarged prostate.

What is the only sure test of stone in the bladder ?

Describe the operation of, and the instruments for sounding the bladder.

What circumstances may deceive the surgeon ?

What is the value of medicinal treatment for stone, generally speaking ?

What forms of calculi are most likely to be affected by the internal use of remedies ?

State what medicines are most useful ?

What is the value of injections into the bladder ?

What is lithotritry ?

Describe the instruments for this operation.

To what class of cases is this mode of treatment best adapted?

Describe the operation in its various details.

What are the principal complications and dangers attending this operation?

Under what circumstances is lithotomy to be preferred to lithotrity? Why?

Describe the necessary instruments for performing this operation.

What is lateral lithotomy? Bi-lateral lithotomy? Median lithotomy?

Describe each method of operating in detail.

When is the one to be preferred to the others?

What are the principal complications and dangers attending lithotomy?

What is the proper after-treatment?

How are urethral and prostatic calculi to be diagnosed?

How treated?

What is meant by Extroversion of the Bladder?

Describe a typical case.

What complications are met with?

What operations are practised for the relief of this condition?

What is the prognosis?

TESTIS, CORD AND EPYDIDYMIS.

What malpositions of the Testis occur?

What is the cause?

What relation does displacement of the testis bear to virility ?

What to liability to disease ?

What causes produce Neuralgia of the Testicle ?

Is it frequent or not ?

What is the appropriate treatment ?

What are the causes of Orchitis ?

Describe the symptoms of orchitis in the acute, sub-acute, and chronic forms.

What are the secondary results of inflammation of the testis ?

Describe the management of acute orchitis. Of chronic orchitis.

Compare in etiology, diagnosis, prognosis and treatment, Epididymitis with orchitis.

What causes develop inflammation of the Cord ?

How is this affection diagnosed ?

How treated ?

What is Hydrocele ?

What are the causes ?

How do the contents of the sac vary ?

What is Hematocele ?

How are the two affections diagnosed ?

What circumstances render the diagnosis sometimes difficult ?

What various changes may take place in the contents and the coverings of an old hydrocele ?

What are the several methods of palliative treatment?
Of radical treatment?

Compare, in value, the methods of simple tapping, tapping with injection of iodine or some equivalent, the seton and free incision of the sac, with or without excision of a portion, the wound being left open.

What is Encysted Hydrocele?

What is hydrocele of the cord?

How are these affections diagnosed?

How does the treatment differ from simple hydrocele of the *tunica vaginalis*?

Does the treatment of hematocele differ from that of hydrocele? If so, how?

What is Varicocele?

On which side most frequent? Why?

How diagnosed?

What is the palliative treatment?

When is radical treatment warrantable?

Describe the several operative procedures for radical cure.

Which is best, and why?

What morbid growths are found in connection with the testicle, cord and scrotum?

In review, compare the differential diagnosis of the several forms of morbid growths in this region, the inflammatory enlargements, hydrocele, hematocele, varicocele, hernia, etc.

What is Spermatorrhœa ?

What are the causes ?

Is the occasional involuntary emission of semen harmful ?

How often may it occur as a normal condition ?

What other affection is often mistaken for it ?

Why is masturbation more harmful than sexual intercourse ?

How is true spermatorrhœa diagnosed ?

When does it call for treatment ?

What are the best methods of treatment ?

What is meant by Impotence ?

What conditions render the male impotent ?

What is the difference between impotence and sterility ?

What causes produce the latter condition ?

Describe the general treatment for the several forms of either affection ?

What circumstances justify castration ?

Describe the operation.

SURGERY OF THE FEMALE GENITO-URINARY ORGANS.

Compare the history of Gonorrhœa in the female with the same affection in the male, with reference to all the most important points.

Describe the operation of catheterism of the female.

Describe the proper method of making a digital examination of the vagina and uterus.

Describe the best methods of ocular inspection as regards position, kind of speculum, etc.

Compare the different forms of specula, and state the choice between them under different circumstances.

What morbid conditions are met with in the Labia and Nymphæ?

What causes produce the large condylomata so often found on these parts?

How are they dealt with?

What causes produce Hypertrophy of the Clitoris?

What relation has this condition to nymphomania?

What is the value of clitoridectomy?

What forms of Cystic Tumors are found in this locality?

How treated?

How does the condition of imperforate vagina compare with that of imperforate rectum in frequency, degree, and indications for treatment?

What causes produce Imperforate Hymen?

What evils result from this occlusion?

With what may it be confounded?

What is the treatment?

Is there any more danger in incising this membrane than in rupturing it? If so, why?

What are the symptoms of Vaginitis?

What peculiarities about the discharges?

State the general treatment.

What is Cystocele?

What is Rectocele?

State the diagnosis and treatment for each affection.

What is Leucorrhœa?

State the various forms and the several causes that may give rise to them.

Is leucorrhœa, of itself, a disease or a symptom?

Define Metritis. Endo-metritis. Cervicitis. Endo-cervicitis.

Compare these several affections as regards their differential diagnosis.

OVARITIS.

What are the most common causes of uterine and ovarian inflammation?

What are the common results of uterine inflammation?

What relation does imperfect involution of the uterus bear to the various chronic affections of this organ?

What causes arrest post-partum involution?

Describe the general treatment of the several varieties of metritis.

In this connection compare very carefully the value of general and local treatment.

Compare the value of local depletion by the different methods, stating them, of nitrate of silver, Iodine, acid nitrate of mercury, etc., etc., applied to the os, cervix, and cavity of the uterine body.

Describe the best methods of making the several kinds of applications.

What is Anteversion ? Retroversion ? Antëflexion ? Retroflexion ? Prolapsus ? Procidencia ?

What causes produce these several conditions ?

What harm results from these displacements ?

How are they to be diagnosed ?

Are they, as a rule, to be viewed as causes or effects ?

When the former, what are the best modes of treatment ?

When the latter, what is the indication ?

What relations do flexions hold to sterility ? To dysmenorrhœa ?

State the value of pessaries in the treatment of displacements.

What danger from their use ?

What benign tumors are found connected with the uterus ?

What are uterine polypi ?

What class of uterine fibroids can be dealt with successfully ?

Describe the best methods of operating for the removal of intra-uterine fibroids.

When excision or enucleation is impracticable, as in the case of sessile sub-mucous tumors, by what means may they be sometimes destroyed ?

What malignant growths are found connected with this organ ?

What special diagnostic symptoms pertain to them in this region?

Is epithelioma of the uterus common or not?

What portion of the organ does it usually attack?

What is "cauliflower excrescence?"

What is the prognosis of epitheliomatous affections of the cervix uteri as compared with other parts of the body?

What is the treatment of these cases?

Under what circumstances is amputation of the cervix justifiable?

Describe the operation.

Define Recto-vaginal Fistula. Vesico-vaginal Fistula.

What causes produce these conditions?

Is the uterus itself ever involved?

What are the diagnostic symptoms of either form of fistula?

Describe the operation for vesico-vaginal fistula, stating first the preparatory treatment, the instruments necessary therefor, the position of the patient, and all the steps of the operation in regular order, from the introduction of the speculum to the adjusting of the last suture, and introduction of the catheter.

How is the operation modified, if at all, when the cervix is involved?

How does the operation for recto-vaginal fistula differ from that just described?

What is the after-treatment?

What is the prognosis in these operations?

- How long should the sutures be allowed to remain ?
What is the prognosis of Lacerated Perineum when left to itself ?
Under what circumstances is operative interference necessary ?
Describe the operation.

OVARIAN TUMORS.

- What is meant by Ovarian Dropsy ?
What known causes produce ovarian tumors ?
Are these growths usually solid or cystic or both ?
Are they oftener unilocular or multilocular ?
Are the polycystic forms usually endogenous or exogenous ?
How do the contents of the cysts vary ?
Usually single or double ?
What, if any, is the pathognomonic character of the fluid of an ovarian cyst ?
What size may they attain ?
At what age most frequent ?
Are they most frequent in single or married women ?
How do these tumors destroy life ?
What is the average prognosis, if the growth is left to itself ?
Describe the symptoms and history of a typical case of ovarian cyst from its commencement to a fatal termination, either by rupture or exhaustion.
Why are patients often unable to tell upon which side it appeared ?

How can the surgeon determine which ovary is involved?

What is the value of the uterine sound in these examinations?

How is a differential diagnosis to be made between a solid and cystic ovarian neoplasm?

How between a unilocular and a multilocular cystic tumor?

How between a single and a double tumor?

How is an ovarian tumor to be diagnosticated from pregnancy?

From a fibroid uterus?

From a fibro-cystic uterus?

From ascites?

From pelvic abscess?

From peri-uterine hematocele?

With what other abdominal affections are these growths liable to be confounded? *

How far are these tumors amenable to medical treatment?

What is the medical and hygienic management?

What are the several modes of palliative surgical treatment?

What is the value of compression?

How to be made?

When is tapping indicated?

Is it ever more than a palliative measure? If so, how?

* Inasmuch as there is no connection in which the student can be more profitably drilled in differential diagnosis, it is hoped that the teacher will extend these questions with reference to all the many causes of abdominal enlargement.

What is the value of injecting iodine after tapping?

What is the danger?

Of what value is paracentesis as a diagnostic measure?

What objection is there to it with reference to the radical operation of extirpation?

Is it or not desirable to practice it in cases where excision is contemplated?

Why or why not?

What, in well-selected cases, is the prognosis after extirpation?

What class of cases may be classed as "well selected?"

What circumstances justify extirpation?

What are the dangers encountered in this operation?

Which form of tumor is most favorable for the operation, solid or cystic? Multilocular or unilocular?

Why?

Is it possible to determine the existence or extent of adhesions before the opening the abdomen?

Why is it difficult?

How does the presence of adhesions modify the prognosis? Why?

If a patient is tapped, with a view to extirpation in the future, what circumstances shall determine the time of excision, or the choice between it and a repetition of paracentesis?

Describe, *in general terms*, the operation for removal of an ovarian tumor.

Should the operation be made during or between the menstrual periods?

Describe the operation in its details as follows:

What is the preparatory treatment?

What care about the temperature of the room and the condition of the air?

State the position and length of the exploratory incision.

Should it be made at once through the entire thickness of the parietes, before extending it or not, and why?

What objection to extending it upward?

How is the peritoneum to be distinguished from the sac wall?

If omentum appears overlying the tumor, what shall be done with it?

When the tumor is exposed, how are the contents of the cyst to be evacuated?

What caution about compressing the abdomen? Why?

What caution about the temperature of the surgeon's hands and instruments?

About the escape of the fluid into the peritoneal cavity? Why?

Describe the manipulations for extrusion of the tumor.

How are adhesions to be managed?

How much danger is there of injuring viscera in tearing these adhesions?

What caution in steadying the tumor and making traction upon the pedicle, after its escape through the wound?

Should the pedicle be divided near the uterus, or as far from it as possible? Why?

Describe the several methods of securing the pedicle.

What is Wells' clamp?

How used ?

What are its advantages ?

Is it best adapted to long or short pedicles ?

Describe the application of the simple ligature ?

Should it be brought out at the lower angle of the abdominal wound, or carried through the vagina ?

Describe the latter procedure.

What is the advantage of the latter method ?

What are the objections to the ligature ?

Describe Stover's method of "capping" and "pocketing" the pedicle.

What are the comparative merits or demerits of these methods ?

What of tying the pedicle and cutting both ends of the ligature close, and returning into the cavity ?

In this operation, is metallic, hemp, or silk ligature best ?

What is the value of Emmett's mode of stitching the pedicle with the "shoe-maker's seam ?"

What the value and what the danger of dividing the pedicle by the actual cautery ?

Is it safe to divide it with knife and scissors, and trust to the actual cautery or the persulphate of iron to control the hemorrhage, returning it into the peritoneal cavity ?

Describe the "spring ligature."

What is its *modus operandi* ?

What are its comparative advantages over the other methods of dealing with the pedicle ?

The pedicle being secured and divided, how should the cavity be cleaned ?

If the other ovary is the seat of incipient disease, should it be removed or not? If healthy?

How are bleeding surfaces from torn adhesions to be treated?

What instruments and material for suture should be used in closing the external wound?

How far apart should the stitches be taken?

Should the peritoneum be included or not?

How should the wound be dressed?

How soon be undressed if all goes well?

What is the general after-treatment?

What are the indications for the use of opiates?

What danger from them?

If the removal is found impracticable from the number and strength of adhesions, what course is to be pursued—if the tumor is unilocular?—if multilocular?

What is the prognosis in such cases?

In the subsequent history of the case, if symptoms of hemorrhage present, what must be done?

If suppuration, with signs of septicæmia supervene, what is the treatment?

Under what circumstances is extirpation of a fibrocystic uterus warrantable?

Describe the operation.

What is the prognosis?

AMPUTATIONS AND EXCISIONS.

What instruments compose an amputating case ?

What is the use of the tourniquet ?

Describe the several forms.

Which is best for ordinary use ?

Are there any objections to this instrument as compared with digital compression by a reliable assistant ?

If so, what ?

Describe the application of the tourniquet.

How is the limb to be emptied of blood previously ?

What are the principal methods of amputation ?

Describe the flap method. The circular. Oval. Combined flap and circular.

What are the general grounds of choice between these several modes ?

Is skin or muscle the best tissue for a flap ?

Describe flap amputation by transfixion.

What should be the length of the flap compared with the diameter of the limb ?

What should be their shape ?

How is the flap beveled most accurately in cutting outward, by pressure on the edge or the flat of the knife ?

Should the least or the most vascular flap be made first ?

Describe the mode of making flaps by cutting from without inward. Of making the first by cutting from without inward, and the second by transfixion.

Describe the circular operation.

In making this, should the muscles be cut even with bone, or left long enough to cover it?

In dividing the bone, what cautions are to be observed with reference to the periosteum?

What in the use of the saw?

What cautions in securing blood-vessels?

What in dealing with the nerves?

Describe the general method of dressing stumps.

Describe the rectangular amputation.

MORBID CONDITIONS OF STUMPS.

What are the essential qualities of a typical stump?

How should the stump be treated with reference to the wearing of an artificial limb?

What change takes place during the perfection of the stump? (This expression is used in the same sense as "perfection of a scar.")

Describe the changes in the blood-vessels. Nerves.
Bones.

What morbid conditions of the blood-vessels may occur?

What of the nerves?

What of the bones?

How are these several medical conditions diagnosed?

How treated?

What faults in the performance of amputation may predispose to or excite the several vascular, nervous, and osseous affections described?

MORTALITY AFTER AMPUTATIONS.

State the general conditions upon which the mortality after amputation depends. In this connection review hospital gangrene, pyæmia, etc.

In more specific terms state the influence of age in influencing the mortality; Of general health; Of hygienic conditions.

How far does the seat of the amputation influence the result?

What difference obtains, other things being equal, between amputations through compact and cancellated bone? Why?

What, *cæteris paribus*, between amputation by section of bone, and disarticulation?

What is the comparative risk between amputation for disease and injury?

When for disease, how does the nature of the disease modify the result?

If for injury, what relation between the interval before the operation, and the result?

Under what circumstances is amputation proper during collapse?

How does the mortality compare between amputations in civil and military practice?

How between primary and secondary amputations? Why this difference?

What is a primary amputation?

What a secondary?

Under what circumstances are double amputations to be performed?

When made, should the first stump be dressed at once, or not until the second amputation is completed?

In disarticulation, is it better to remove or leave the synovial surfaces, as a rule? Why? *

SPECIAL AMPUTATIONS.

HAND.

Describe the instruments for, and the general methods of, amputating the fingers?

Are these usually made by section of bone, or disarticulation?

What are the superficial guides to the precise plane of articulation?

What is the rule with regard to amputation through the proximal phalanx? Why?

Is this rule sound?

Why is an exception made in the case of the index fingers?

Describe the different modes of disarticulation at the meta-carpo phalangeal joint?

When should the head of the metacarpal bone be removed, and when not? Why?

At what point should this be done?

With what instruments?

Describe the amputation of the thumb.

Disarticulation of the metatarsal bones at the carpus.

* It is advised that the student be required to describe each special amputation in detail, step by step. He will also indicate for each locality his preference for the flap, circular, or oval methods, giving the reasons for his choice.

Why is it so important to save every portion of the hand possible, however small?

State the extremes to which conservative surgery may and should be carried in this member?

State the general plan of dressing all these wounds.

FORE-ARM.

At what point is the fore-arm most frequently amputated?

Describe the operation at the wrist.

Should the styloid processes be removed, or not?

In the middle of the fore-arm, stating the application of the tourniquet, the position of the limb, length of flaps, retractor to be used, and how, mode of sawing the bones, blood-vessels to be secured, and the dressing of the stump.

The same questions are expected to be answered for each of the special amputations, whether the term is used as applied to locality or method of operating: *i. e.*, for each locality and method, the student is to describe the application of the tourniquet, or the fingers of an assistant, the position of the limb, the length of flaps, the retractor, the mode of sawing, differing, as it does, for single and double bones, the securing of the blood-vessels, and the final dressing of the stump.

At what point in the fore-arm is amputation best, with reference to wearing an artificial limb?

What amputations can be made with advantage at the elbow joint?

Describe the several amputations of the arm.

How near to the shoulder is it safe to amputate, on account of the liability to necrosis?

Describe the amputations practiced at the shoulder joint.

What is the average mortality, after amputations of the hand, fore-arm, arm, and shoulder?

Compare the several amputations of the toes with those described for the thumb and fingers, stating the differences, and the reasons therefor.

Describe Hey's operation?

When indicated?

What difficulty in performing it?

What is Chopart's operation?

When indicated?

What objections to it?

How and to what extent may these be measurably overcome?

In amputations through the foot, is it necessary to follow the lines of articulation, or *may the whole be treated as one bone?*

How far are the demands for, and methods of, conservative surgery in the hand applicable to the foot?

Describe Symes' operation for disarticulation at the ankle.

How does it differ from Pirogoff's?

What conditions require this and what the other?

Which is preferable? Why?

What modifications of either may be practised?

Are the malleoli to be removed or not?

What of the articulating surface of the tibia?

What are the "points of selection" in amputation of the leg?

What the grounds of choice between them?

Describe antero-posterior flap amputation of the leg.

Lateral flap amputation.

The circular method.

Any modifications of these?

What care about the sharp angle of the tibial spine?

What several methods of amputation are practiced at the knee joint?

State the comparative advantages of each.

Should the condyles be removed or not? Why?

Should the patella be left or not? Why?

How does this operation compare in safety and value of the stump, with amputation of the thigh, just above the condyles?

Describe the several methods of amputation of the thigh.

What circumstances will determine the choice between antero-posterior and lateral flaps, oval or rectangular flaps, and the circular method?

Describe the proper modes of amputation at the hip joint.

State the general prognosis for the several amputations of the foot, leg, thigh, and hip.

Upon what does the mortality mainly depend?

EXCISION.

As a general rule, when is excision to be preferred to amputation?

Answer this question both for disease and injury.

What conditions are most favorable for a successful resection?

What instruments are requisite for the operation?

Describe the operation of excision, in general terms, with special reference to the following points:

1. Character of the incision and removal of skin.
2. Amount of bone to be removed. (Shall all softened bone be excised?)
3. Removal of epiphysis in young children and in adults.
4. Treatment of periosteum.
5. Dressings and after-treatment.

SPECIAL EXCISIONS.

Describe the operation of resection of the shoulder-joint.

Under what circumstances will the several forms of incision; straight, curved, T, or H shaped, be employed?

What is the prognosis, both as regards life, health, and mobility?

How does the operation made for disease differ from that practiced in gun-shot injuries?

Describe and compare in the same manner the several modes of excising the elbow. The wrist. The Metacarpo-phalangeal articulations. The

hip. The knee. The ankle. The foot. The scapula. The clavicle. The ribs.

GENERAL CONSIDERATION OF WOUNDS.*

State the general management of simple incised wounds.

How to be cleansed?

What are the simplest and what the most efficient retentive measures?

What kind of union is expected?

Describe the several kinds of sutures.

When is the one form to be preferred to another?

When are sutures to be employed instead of bandages, collodion, or adhesive plaster?

State the value of the last three agents.

What is a contused wound?

What a lacerated wound?

What are the especial dangers from these wounds?

Why these peculiar tendencies?

What is the general management of contused and lacerated wounds? Why?

How do punctured wounds differ from the contused or lacerated varieties, in character, prognosis, and treatment?

Does simple inflammation, erysipelas, or gangrene, arising from a traumatic cause, require any special treatment, as compared with the idiopathic forms of these diseases?

* These questions are reserved till the close of the volume, for the reason that to answer them correctly will require of the student a very considerable review of the course.

GUN-SHOT WOUNDS.

What is the general character of Gun-shot Wounds?
State the various modifying influences operating to produce the great variety of these wounds.*

In this connection, compare the nature of the projectile, the force with which, and the direction in which it strikes.

Why is the wound of the entrance of a bullet smaller than that of its exit?

Is this always so?

If not, why the exception?

Why the difference between the wounds produced by a minie ball, a common round ball, and a slug?

How is the terrible laceration of a minie ball accounted for?

How is the deflection of a bullet around the neck, body, or skull, without penetration, accounted for?

Answer the same questions for deflections generally.

What is meant by a "spent ball?"

What by the "wind of a ball?"

How are those fatal cases explained which are said to be due to the "windage of the ball?"

What class of wounds result from shells?

What from canister and grape?

What is the general character of shot wounds?

Does the simple fact that a contused, lacerated, or punctured wound results from a military projectile or weapon, modify the prognosis or treatment?

* The student should make himself familiar with the science of projectiles, before attempting an answer to these questions.

State the proper method of exploring gun-shot wounds.

What are the necessary instruments ?

Describe Nelaton's probe.

What is its value ?

Describe the various bullet forceps.

Which the best ? Why ?

Also, describe the instruments for removing splinters, etc.

When the foreign body is not readily found is it proper or not to mutilate the limb to find it, unless it is producing irritation ?

What must be the surgeon's guide in these cases ?

What is the prognosis when a bullet, or any metallic substance is impacted in the flesh ?

Which is most likely to do harm, pieces of wadding, or clothing or metallic substance ?

How are small shot to be dealt with ?

In wounds of the long bones from minie balls, what is the general indication, amputation or excision ?

How is it in shell wounds ?

In wounds of the joints from minie balls, what is the prognosis and treatment ?

What circumstances must decide between excision and amputation ?

State, *in review*, how far the fact that any particular lesion is from a powder-projectile modifies the prognosis and treatment.

Why do soldiers bear primary amputations or excisions so well ?

Why do they bear secondary operations so badly ?

E R R A T A .

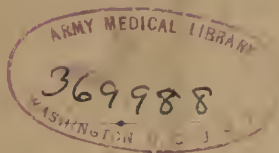
Page	6,	line	7,	read	of for by.
"	15,	"	14,	"	pyæmia for pyræmia.
"	19,	"	7,	"	Labarraque's for Labbarraque's.
"	21,	"	15,	"	phagedenic for phagadenic.
"	23,	"	1,	"	"transplantation" for rhinoplasty.
"	25,	lines	26 and 27,	read	intra-mural for intra-mutal.
"	27,	"	28,	read	osteoma for ostoma.
"	31,	"	6,	"	echinococcus for echinoccus.
"	34,	"	28,	"	colloid for calloid.
"	35,	"	11,	"	means for names.
"	35,	lines	21 and 23,	read	myeloid for myceloid.
"	35,	line	28,	read	epithelioma for epitheloma.
"	36,	lines	21 and 22,	read	applied for aprplied.
"	51,	"	28 and 29,	read	septicæmic for septicæmic.
"	57,	line	1,	read	molluscous for moluscous.
"	59,	"	16,	"	they for the.
"	73,	"	27,	"	ressort for resort.
"	74,	lines	20, 21, and 27,	read	septicæmia, pyæmia, ichor-æmia, septicæmic, for septicæmia, pyræmia, ichor-æmia, scepticæmic.
"	76,	line	19,	read	anastomosis for anastamosis.
"	76,	"	26,	"	capillary for cappillary.
"	77,	"	28,	"	" " "
"	78,	"	29,	"	ossium for ostium.
"	90,	"	30,	"	zygomatic for zigomatic.
"	99,	"	27,	"	vertebræ for vertebrae.
"	104,	"	12,	"	acromion for acromia.
"	106,	"	1,	"	carpo-radial for carpo-radia.
"	107,	"	17,	"	pubes for pubis.
"	118,	"	2,	"	indentation for indention.
"	119,	"	30,	"	pathognomonic for pathognomic.
"	124,	"	4,	"	kerato-globus for kereto-globus.
"	124,	"	29,	"	for for from.
"	125,	"	25,	"	Iridodialysis for Iridodyalasis.
"	129,	"	18,	"	predisposing for immediate.
"	130,	"	5,	"	myopic for mopic.
"	135,	"	2,	"	otorrhœa for oterrhœa.
"	137,	"	13,	"	antrum for autrum.
"	138,	"	24,	"	œdema for ædema.
"	140,	"	17,	"	Describe for Desribe.
"	145,	"	13,	"	dilatation for dilaliation.
"	154,	"	26,	"	Epididymis for Epydidymis.
"	167,	"	21,	"	septicæmia for septicæmia.
"	171,	"	20,	"	metacarpo-phalangeal for meta-carpo-phalangeal.



QUESTIONS
IN
SURGERY.

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